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ABSTRACT

American Indian and Alaska Native children with special needs experience the same ineffective and inefficient services as other minority language children. This paper discusses the special needs of Native children, assessment and curriculum issues, and recommendations for improvement. It provides statistics for various categories of handicaps and for Native preschool children, school-aged children, and adults. Some conditions affecting Native children at high rates are described: learning disabilities, fetal alcohol syndrome, communication disorders, hearing impairments, and meningitis. Support for the education of disabled persons has been secured through legislation, particularly P.L. 94-142, which outlines procedures for screening, referral, assessment, placement, and staffing. Nevertheless, assessment practices have been criticized. Particularly relevant for Native students are criticisms related to cultural and linguistic test bias, the creation of self-fulfilling prophecies, and the widespread use and misuse of standardized tests. Alternative assessment practices include academic task analysis, pluralistic assessment, culture-fair procedures, an advocacy-oriented model, and addition of a sociocultural dimension. Curriculum issues and recommendations are related to bilingual special education, the Regular Education Initiative, early childhood education, reading instruction, mathematics instruction, and functional life skills. Also discussed are teacher shortages, parent and community involvement, the need for preschool programs, and future Native programming needs. This paper contains over 150 references. (SV)

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American Indians and Alaska Natives with Disabilities

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Introduction

The education of cultural and language minority children with special needs has been filled with controversy for decades. After years of hiding these children in homes, relegating them to obscure corners of schools, or isolating them in poorly staffed programs, America has gradually modified its policies and practices in response to litigation and legislation. If it were not for the courage of parents, enlightened educators, and other supporters, the educational conditions for children with special needs would have remained in the dark ages of education. Yet, the changes that have occurred, as a result of statute, regulation, and policy, have not swept away all the problems facing these children. Therefore, we must be vigilant in the protection of the educational opportunities for children with special needs and monitor implementation of regulations, allocation of resources, and staffing of programs. Any slackening of effort will result in diminished effort by school officials, policymakers, and tribal leaders.

Evaluations of American Indian and Alaska Native education and subsequent decisions for reform which ignore the special educational needs of Native children cannot be tolerated. The humaneness of facilitating educational opportunities for Native children with disabilities has been embraced by many. Yet, many other educators have yet to be convinced of the benefits of education for disabled children. Resistance, lack of awareness, and low priority have been major setbacks for implementation of special education services. It is true that providing an appropriate educational environment for special needs children is philosophically and pedagogically complex.

The tribal leader, politician or even the most renowned Indian educators may have limited training in the field of special education. Their visions of education, therefore may be blurred when dealing with Indian children with special needs. It is imperative that we gain clarity and understanding on the extent of the needs of Native children with disabilities. Leaders of tribes and educational institutions must become familiar with the language of law that protects them. The capacities of the various educational institutions must be determined and the resources necessary for fulfilling those needs must be recognized.

This paper attempts first, to describe the special needs of American Indian and Alaska Native children as reported in various statistical reports and the Indian Nations at Risk (INAR) Task Force hearings. Second, it reminds us of the laws protecting the rights of these children. Third, it emphasizes educational efforts that are appropriate for their needs. Fourth, recommendations are advanced for implementation and reform.

Statement of the Problem

American Indians and Alaska Natives and Special Education

American Indian and Alaska Native children with special needs have experienced the same ineffective and inefficient services as other language minority children. Their needs have been ignored or subjugated to the lowest levels of priority. One need not look far into the past to recognize the lack of concern accorded to special education programs. When resources of schools became strained, it was the special education students who used portable buildings, basements, or buildings in most need of repair. When materials were needed to provide a culturally and linguistically appropriate program, none were available. When staff were required to meet the various conditions of need, few teachers were certified to provide appropriate instruction. In short, needs of students in special education were often last to be addressed and first to be reduced.

The needs of Indian children with special needs cannot be excluded, limited, nor ignored in our evaluation and recommendation for changes in education for American Indian and Alaska Natives. To continue in this vein is to exacerbate their disabilities and to maintain their posture as children at greatest risk. To provide special education and related services is to give our Native children with disabilities a chance at life and their families an opportunity to have pride in their

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achievements striving toward contributing participants in family, and community.

Population

American Indians numbered 1.9 million people based on the 1990 Census. Based on estimates for the general population for the percentage of people who would likely be disabled which is 10 percent. It would be estimated that 190,000 American Indians, while three percent of the general population would have a significant level of disabilities. American Indians, however, experience disability at 1 1/2 times the rate for the general population (Morgan & O'Connell, 1986).

Indian children who require special education services in order to access education represent nearly 17 percent of the enrollment in the Bureau of Indian Affairs and 9.88 percent of the public school enrollment (O'Connell, 1987). Based on these percentages and projected estimates from the OCR data, over 44,700 Indian children had been placed in special education, most of them in the categories of learning disabilities and speech impaired.

It is important, however, to describe briefly and call attention to those behaviors which characterize Native people both as individuals and as members of a tribal group. Characteristics might include the manner and language of greeting; patterns of interaction with family or tribal members; expectations we have of one another and with those we interact; vocabulary and language use in English and/or native language; participatory roles in ceremonies, social events, etc. For example, when visiting one's family, protocol may require the visitors to shake hands with all those present. Verbal greetings may be defined by the age or status of an individual. Ceremonies or tribal rituals may hold expectations for family or clan members to contribute in terms of time, energy, or donation of food or other items. The use and appropriateness of humor might be observed along with acceptable topics of humor. Teasing may be acceptable between certain members of the family like uncle and nephew. These various aspects of behavior are typically learned through observation and in context. Thus, a norm for behavior is established. Those whose actions are beyond the norms for behavior might not fit in as readily.

Native children with disabilities need also to have the same opportunities to learn acceptable behaviors through observation and through situations where they can try out the behaviors in a safe environment. Regardless of the disabling condition, the children are American Indian and Alaska Natives first and all that it may entail — language, culture, values, and beliefs. While it may seem redundant to make such a statement, it is important to note that in the delivery of service to Indian children, their disabling condition does not preclude the presence of a cultural and language base. They are not acultural. People with disabilities are members of their cultural group — Acoma, Choctaw, Shoshone-Bannock, Navajo, and Yakima etc. Acknowledging this premise is to recognize that the extent to which education and services incorporate culture and language and their disability is to serve the entire individual.

Legislation

Legislation has been a leveraging mechanism through which support for disabled persons has been secured. Legislation which has had significant impact on assurances for people with disabilities include: The Rehabilitation Act of 1973 and subsequent amendments, amendments to The Elementary and Secondary Act (ESEA) of 1976, The Education for All Handicapped Act of 1974 and subsequent amendments, (P.L.101-476, Individuals with Disabilities Education Act) Developmental Disabilities Act of 1984, and the Americans with Disabilities Act of 1990.

The Rehabilitation Act, Public Law 93-112 enacted in 1973 included language which specifically addressed discrimination against persons with handicaps. Specifically, Section 504 of this legislation stated:

> No otherwise qualified handicapped individual in the United States, as defined in section 7 (6), shall solely by reason of his handicap, be excluded from the participation in, be denied the befits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

A 'handicapped individual' was defined as "... any individual who (a) has a physical or mental disability which for such individual constitutes or results in a substantial handicap to employment and (b) can reasonably be expected to benefit in terms of employability from vocational rehabilitation services ..." (Public Law 93-112 Section 7 (6)).

Amendments to The Elementary and Second Education Act of 1976 provided grants to states including the Bureau of Indian Affairs through Title VI for special education projects. The BIA applied for and administered funds to develop projects for Native children with special needs.

In 1974, the Education for All Handicapped Act, Public Law 94-142 was passed addressing specifically education of children with disabilities. Parents and advocacy groups brought attention to the exclusion of children with handicaps who were being denied the right to an education. Two cases were particularly significant in securing the right

to an education for children with handicaps — *Pennsylvania Association for Retarded Children (PARC) v. Pennsylvania* (1971) and *Mills v. Board of Education of D.C.* (1972). Both cases were based on equal protection of the law. Provision of a free public education, if provided to all school-aged children, could not be denied to children with handicaps "on the basis of an unalterable trait — their handicap" (Turnbull & Turnbull, 1978 cited in Baca & Cervantes, 1989). The act defines a handicapped child as follows: mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multihandicapped, or a specific learning disability.

Key elements contained in Public Law 94-142 which were meant to protect children from being misplaced in special education are as follows:

- **Screening**. Broad scale-testing procedures are employed to identify students who may require more intensive assessment.
- **Referral**. Appropriate specialists are consulted about a student who may require further assessment and special education services.
- **Assessment**. Information is systematically collected regarding the student's mental, social, academic, and psychological performance to identify specific abilities and weaknesses.
- **Staffing**. An official meeting involves all concerned persons such as teacher and speech therapist, concerning the education and placement of a particular student. The student's primary handicap, need for specialized services, and type of intervention required are discussed during the staffing.
- **Placement**. Special education programs offer a variety of placement configurations. Placement offerings reflect the various types of assistance that students may require (Gearhart, 1980, cited in Baca & Cervantes, 1989, p. 90).

Public Law 94-142 also requires that there be parental involvement in the educational process of the child with a disability with the specific requirement of 'informed parental consent'. If a parent's primary language is other than English, the parent must be informed in the language they can understand.

Subsequent amendments to the Rehabilitation Act were made in 1978 for establishment of American Indian Vocational Rehabilitation Services. Specifically, Section 130 stated that the Commissioner "... may make grants to the governing bodies of Indian tribes located on Federal and State reservations to pay 90 percent of the costs of vocational rehabilitation services for handicapped American Indians residing on such reservations."

Authorization was given for appropriations to Indian tribes in "... the sum shall be not less than 1/4 of 1 percent and not more than 1 percent of the amount under paragraph (1) as determined by the Secretary." Presently, 14 tribes are recipients of grants under this subsection. The 1986 reauthorization of the Rehabilitation Act included that "... where appropriate, may include services traditionally used by Indian tribes" (Section 211 (b)). Inclusion of this part permits the use of culturally unique services such as native healing for the purpose of rehabilitation.

The Developmental Disabilities Act of 1984 was enacted for purposes which included: (a) provision of comprehensive services to persons with developmental disabilities, (b) to assist States in planning activities, (c) to make grants for model programs, demonstration programs, and training grants. The Act also included authority for the Secretary to make grants for projects including those of "national significance ... which hold promise of expanding or otherwise improving services to persons with developmental disabilities (including Native Americans).

The Americans with Disabilities Act of 1990 (Public Law 101-336) referred to as "civil rights" legislation for people with disabilities was signed into law in July 1990. This legislation was enacted to "extend protection to people with disabilities in the public and private sector even when they are not recipients of federal funds" (Brady, 1990).

Natives with Disabilities

Background

A question often posed in varying ways has been, "Why are there so many more handicapped people now than there used to be?" One factor is that medical care coupled with medical technology is much more readily available than it once was resulting in increased survival rates. Thus, many more individuals have the chance to live longer — past childhood into adulthood. Secondly, legislation which authorizes funds for services require that recipients meet certain criteria, resulting in the identification of individuals in order to meet eligibility requirements. Thirdly, the number and percentage of children with disabilities indicate that American Indians and Alaska Natives experience disabilities at a higher rate than the

general population. Fetal alcohol syndrome, for example occurs at particularly high rates in some tribes. Other conditions have resulted from suspected maternal exposure to radioactive areas resulting from mining activities. Thus, irrespective of the causes for the Native children and their disabling conditions, they are among us. The most important questions are 'What are their needs?' and 'How can we meet those needs?'

Need

Disabling conditions occur at every stage of life including stages prior to birth — conception and at the pre-natal stage. Children with disabilities may experience delays in normal or average development in areas of: (a) mental development, (b) sensory abilities, (c) communication abilities, (d) social development, and/or physical development. Disabling conditions can result from genetic anomalies (Down Syndrome), teratogenic substances like alcohol (fetal alcohol syndrome), and bacterial infections like hemophilus influenza type B (meningitis).

The needs of American Indian and Alaska Natives with disabilities are determined by the number of individuals with disabilities and the type of disability. These two bases of information will determine the resources that are needed. The number of Indian people needing services is determined by the definitions operationalized through legislation for pre-school aged children, school-aged children, and adults. Table 1 provides information on the number and/or percentage of disabilities followed by the types of disabilities which affect Native people at high rates.

Pre-school children

Head Start programs have been the primary agency serving Native children with disabilities. In the year 1984-85, 11.52 percent (1,907 of 16,548) of the Head Start enrollment were children with handicaps in 103 Indian Head Start programs. The percentage of children with handicaps served by Head Start increased from 8.7 percent for 1979-80 to 11.52 percent for the 1984-85 school year. For preschool-aged children, information has become available through a report mandated by the 1986 amendments to the Education for Handicapped Act, Public Law 100-297 (GAO, 1990) to determine the number of 3 and 4 year old children needing services and the type of services. It was estimated that there are 8,500 to 12,800 preschool children of ages 3 and 4 years with disabilities. Of these estimates, 3,000 children were on 63 reservations with Bureau of Indian Affairs (BIA) schools. Further, of the 3,000 children, 838 were receiving special education services in the 1988-89 school year. It was estimated that approximately 2,110 to 2,948 children on reservations with BIA schools might need, but were not receiving special education services. For the children receiving special education services (838), service providers included one or more of the following: BIA, Head Start, IHS and public schools. Nearly one-fourth of the 791 children with individual educational plans (IEPs) were not receiving the full complement of services prescribed in their IEPs. However, the number of children who are receiving inadequate services may be an underestimate because IEPs often contain services which agencies are able to provide rather than those which represent the actual needs of the child.

School-Aged Children

A national study was conducted in 1987 to identify problems and needs of American Indians with handicaps (O'Connell, 1987). Data on the school-aged children was derived from two sources — the Bureau of Indian Affairs and the US Department of Education, Office of Civil Rights. These two sets of data provide information on 95 percent of the Native school-aged children. The Bureau of Indian Affairs schools have 10 percent of Indian student enrollment and public schools which serve 85 percent of the students.

There were limitations in the two sources of data, BIA data included the number of children served in 10 categories, whereas OCR collected data on children receiving Special Education services within public schools in five categories. Projections for the total number of Native children with disabilities was 44,752. The data revealed that half (50.05%) of the Indian children were classified as Learning Disabled. The second and third highest placements in special education were Speech Impaired (25.17%) and Educable Mentally Retarded (11.26%) respectively. Based on 5 categories of disabilities (educable mentally retarded, trainable mentally retarded, speech impaired, seriously emotionally disturbed, and learning disabled), the percentage of American Indian and Alaska Native school-aged children with disabilities was the highest at 9.88 percent, with the exception of Blacks at 10.31 percent. The percentage of white children with handicaps was 8.51 percent.

Data from the BIA show that 16.89 percent of the student enrollment are placed in Special Education, whereas 11.20 percent of the US student population are placed in Special Education. Half (8.72%) of the Indian students enrolled in Special Education are categorized as learning disabled. The second highest category for Special Education placements in BIA schools were speech

TABLE 1
Comparison of Percentages by Handicapping Condition from Office of Civil Rights, Bureau of Indian Affairs and U.S. Population Data

Category	BIA %	OCR %	U.S. %
Mentally Retarded	1.04	1.66	1.84
Specific Learning Disabled	8.72	5.28	4.73
Seriously Emotionally Disturbed	0.65	0.61	0.96
Multi-Handicapped	0.38		0.18
Hearing Impaired	0.05		0.18
Visually Impaired	0.02		0.08
Orthopedically Impaired	0.06		0.15
Other Health Impaired	0.14		0.18
Speech Impaired	5.74	2.33	2.90
Deaf-Blind			0.005
Residential handicapped	0.09		
Total Special Education	16.89	9.88	11.20

Note: From "A Study of Special Problems and Needs of American Indians with Handicaps both On and Off Reservation," (p. 25) J.C. O'Connell (Ed.), 1987, Northern Arizona University.

impaired (5.74%) and mentally retarded (1.04%).It must be noted, however, that the category of speech impaired is a duplicated count for children in BIA schools. All children receiving speech services are counted even when if they are counted in another category. For example, a student might be counted as both mentally retarded and speech impaired.

There appears to be some discrepancy in the percentages for students in the categories such as mentally retarded and hearing impaired. The percentage in the category of mentally retarded within BIA was 1.04 percent as compared with the U.S. rate of 1.84 percent. In view of conditions such as fetal alcohol syndrome and meningitis which are frequently associated with mental retardation, it is likely that the percentage of mental retardation as reported by BIA is an underrepresentation. It is possible that Child Find activities are missing some children with special needs. Similarly, the number and percentage of Native children with hearing impairments is considered to be an underestimate. Conditions such as otitis media continue to be prevalent among Native people. In the state of South Dakota, hearing impairments are reportedly 20-30 percent higher for Native children than for non Native children.

In a comparison of data from the US Department of Education, Office of Civil Rights, "the number of American Indian students attending public elementary and secondary schools [between 1978 and 1986] ..." increased eight percent. In this same period, however, the percentage of American Indians students with disabilities (mentally retarded, speech impaired, seriously emotionally disturbed, and learning disabled) in programs increased 41.8 percent. During this period, 80 percent of the American Indian children in special education were in the categories of learning disabled and speech impaired.

Adults with Disabilities

This report focuses on education of Indian children, however data from the vocational rehabilitation system which serves adults with disabilities is important to consider as an index of anticipated needs. In the Survey of American Indians and Alaska Natives (SAIAN) for 1987 (Altman, 1990) which included issues on health status and health care, it was estimated that 172,512 individuals 18 years of age and older had some type of limitation. "This number represents 33 percent of the total estimated population 18 and over who are served by the Indian Health Service and live on or near a reservation" (Altman, 1990, pp 10-11). In particular, Native men and women ages 18-44 are more likely to report limitation of a usual activity due to a health condition than would be reported by the general population. There is an alarming relation between the accidents and resultant disability. Of those who survive accidents, 25 percent report total work limitation, while 37.5 percent reported some activity limitation.

While there are conditions which result in disabling conditions from conception, during pregnancy, or in early childhood, there are conditions which

can be prevented like auto accidents which have devastating and long-term disabling effects. Issues and concerns in adulthood are similar to those of non-disabled individuals. Education or training leading to employment is a typical objective of young adults with independence being a high consideration. Many Native disabled adults perceive the possibility of independent living much less employment to be merely a dream. The state-federal system of vocational rehabilitation services which is available to any disabled persons affords individuals the opportunity to achieve goals of independent living, training and/or employment.

Vocational rehabilitation (VR) is a federal-state system of services for adults with disabilities. Vocational rehabilitation services are based on eligibility criteria rather than on an entitlement basis. Although American Indian and Alaska Natives have a rate of disability 1 1/2 times greater than the general population, they are underrepresented in the service delivery system of vocational rehabilitation. In 1978, amendments to the Rehabilitation Act included a section authorizing funding for Indian Vocational Rehabilitation Programs in an amount "... not more than an amount equal to 1 percent of the amount appropriated for ... this subsection."

Fourteen tribes have been awarded funds to operate tribal vocational rehabilitation programs. In 1987, a total of 574 individuals were referred for services; 341 American Indian and Alaska Native clients received services from nine of the tribal vocational rehabilitation projects. In 1988, the number of clients referred was 846; those who received services increased to 643 served by 16 projects.

Sources of referrals to the tribal vocational rehabilitation projects came from a variety of agencies, however of the 574, the largest source was through self-referral (144, 25%) for the year 1987. Other referral sources were: Indian Health Service (93, 16%); Social Security Administration (54, 9%); and public school (31, 0.5%). In 1988, other agencies were involved in making the 846 referrals including: Social Welfare (190, 22%); self-referral (165, 19.5%); tribal organization (65, 7.6%); and public schools (31, 0.3%). Issues of transition for disabled individuals from school to work have been of concern. For example, when disabled students exit from high school including dropouts, are they referred to Vocational Rehabilitation? If not, in what activities are they involved, if any? The low percentages of referrals of less than a half percent (0.5% and 0.3%) indicates that networks need to be established which would facilitate referral of Native children with disabilities to Vocational Rehabilitation.

In the years of 1987 and 1988, tribal vocational rehabilitation projects served 1,035 clients with disabling conditions such as follows: (a) alcoholism (272), (b) "other" disabilities (187), (c) orthopedic/musculoskeletal (113), (d) mentally retarded (96), (e) learning disabled (84), (f) spinal cord injury (43), (g) mental illness/psychological (42), and (i) arthritis (41) (Lonetree, 1989, p. 21). The category of "other" disabilities included those such as heart conditions, renal conditions, cancer, respiratory related conditions, speech disorders, diabetes, and back injuries. Services provided to the Native people with disabilities were of four categories: (a) personal counseling, (b) vocational counseling, (c) vocational evaluations, and (d) psychological testing. Other services included: (a) resource management, (b) training, (c) transportation, (d) on-the-job training, (e) education, and (f) physical capacity evaluation (Lonetree, 1989, p. 24).

Effects of Socio-Economic Conditions

Native people experience rates of disability at considerably higher rates than for the general US population. In addition to high rates of disabilities, Native people are affected adversely by socio-economic indices in areas of education, health, economy, unemployment, and high rates of poverty. In the 1980 US Census (1983), 27.5 percent of American Indians had incomes below the poverty level compared with 12.4 percent of the general population. Examples of the percentage of families in poverty for specific tribes are: Navajo — 42.7 percent; Sioux — 36.5 percent; Pueblo tribes — 28.5 percent; Choctaw — 17.7 percent; Apache — 29.6 percent; and Creek — 16.7 percent. Although conditions of poverty are not causal factors of learning difficulties or developmental delays, they limit resources brought about by poverty and reduce or eliminate access to services which can improve the quality of life (News Digest, 1987). For example, poverty conditions can influence and limit access to health care and educational opportunities and impact on nutrition. A low socio-economic level will likely the affect the quality of life. Educators must recognize that children from family situations of limited income do not equate with nor cause limited intelligence. The parallel is drawn that a child from a disadvantaged family (limited resources) will be a disadvantaged learner. Two levels of assumptions typify reactions to children from disadvantaged families:

> First, stereotypic ideas about the capabilities of a child who is poor or who belongs to an ethnic minority will detract from an accurate

> assessment of the child's real educational problems and potential. Second, by focusing on family deficiencies, ... (one) misses the strengths of the cultures from which many disadvantaged students come. ... focusing only on ... family dysfunction may obscure the larger picture of a community's culture and its strengths. (Knapp & Turnbull, 1990, p. 5)

Such perceptions by teachers and evaluators may steer their decisions toward special education referral and placement more readily than a well-dressed child from a middle class family.

Types of Disabilities

Types of disabilities provide indicators of the range of resources needed for persons with disabilities. Conditions which are prevalent among Native children include learning disabilities, fetal alcohol syndrome, meningitis, hearing impairments, communication disorders and others. The prevalence of disabling conditions observed at the pre-school age provide us with information on planning and development of services for school-age populations. Similarly, disabling conditions observed in the school-age population indicate the services for which we can plan in the adolescent and adult age groups. Brief descriptions are provided of some conditions which affect Native children at high rates — learning disabilities, fetal alcohol syndrome, meningitis, hearing impairments, and communication disorders.

Learning Disabilities

The category in which the largest number of Native children are identified is learning disabilities. Learning disabilities are not easily defined perhaps because of the diversity of conditions which might constitute a learning disability. This category defines broadly, persons "who display a significant discrepancy between expectations for academic performance and actual performance." (Coplin & Morgan, 1988, p. 614). Regulations for Public Law 94-142 were released in 1977 pertaining to definitions for learning disability which included specific criteria:

> "Specific learning disability" means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing or motor handicaps of mental retardation, or emotional disturbance, or of environmental, cultural, or economic disadvantage. (US Office of Education, 1977, p. 65083)

This definition states specifically that learning disability shall not be used to define children with learning difficulties which might be attributed to culture or economic disadvantage. In addition, an individual who spoke or wrote in a language other than English could not be considered as having a learning disability in the absence of other characteristics which define learning disability.

Fetal Alcohol Syndrome (FAS)

In the early 1970s, Jones and Smith (1973) brought attention to the relationship between alcohol abuse during pregnancy and the resultant birth defects. The syndrome is characterized by pre- and post-natal growth deficiencies, dysmorphic facial features, and central nervous system dysfunction (Clarren & Smith, 1978). Among American Indians and Alaska Natives, the incidence of fetal alcohol syndrome ranges from 1 in 100 births to 1 in 750 births (May, Hymbaugh, Aase, & Samet, 1984).

Individuals with fetal alcohol syndrome may require a range of services based on the severity of the syndrome. Services might include medical services, educational services, and family and community resources (Giunta & Streissguth, 1988). Medical care and services stem from the array of conditions like malformations of the ear, eye, heart defects, cleft lip and palate, and skeletal anomalies. Central nervous system dysfunctions might be observed through a weak suck, feeding and sleeping difficulties, and a failure to thrive. The FAS child will likely continue to be 'small for his age.'

Infants and young children with FAS can benefit from early intervention to promote mental and motoric development. The infant stimulation or preschool services may not ameliorate significantly the intellectual or physical deficits, however it can offset any further deterioration. It is possible that FAS children would qualify for Special Education services thereby receiving the educational support that is essential for them. Vocational training in high school should be an option and opportunity, the label of FAS/FAE however does not automatically result in special education placement as the post-secondary training programs may be too rigorous and difficult for FAS students. In addition, it would be most beneficial for FAS individuals to acquire life skills such as "money management, safety skills, interpersonal relating..." (Giunta & Streissguth, 1988, p. 456).

Observations of FAS individuals indicate that "they are at higher than average risk for physical abuse, sexual abuse, and neglect. They are frequently raised in high-risk environments by mothers who struggle for sobriety, have few resources, and little support" (Giunta & Streissguth, 1988, p. 456). A parent who adopted FAS children describes them similarly "Our older children,....cannot function independently, cannot hold jobs, tell the truth, manage money, plan a future" (Dorris, 1990, p. 3).

Dorris (1990) estimated that the number of babies born annually who will experience learning problems due to prenatal exposure to alcohol and crack cocaine is 300,000. Concern exists as to whether the number of FAS or drug babies will continue to increase. Given these estimates, the population of FAS and FAE children will be three million in ten years — "if" the rate were constant. While the consequences of FAS are devastating and irreversible, fetal alcohol syndrome is preventable.

Communication Disorders

National estimates of children under the age of 18 years with communication disorders is 10 percent (Boone, 1987). Harris (1986) suggested that the rates of communication disorders among American Indian children may be 5 to 15 percent greater than in the general population. A conservative estimate is that 70,000 Native children may be in need of services for communication disorders (Pipes, 1990). Conditions which affect communication include cleft palate and cleft lip, which occur at a rate of 1 in 400 among American Indians as compared with a rate of 1 in 700 for the general US population (Pipes, 1990).

In reference to Native children who speak their native language or who lack proficiency in English, it is critical that clinicians determine if indeed a speech or communication disorder exists. Production of language by bilingual speakers should not be misdiagnosed as disorders of articulation, voice, or fluency. Determination of the existence of a speech or language disorder would necessitate an assessment of communicative competence. For example, a speech or language difference might be observed only in one language (English or native language) and not the other. Factors to be considered include: (a) language of proficiency, (b) language sample in school and home, and (c) tribal or regional language differences (Bernal, 1977; Payan, 1989).

Hearing Impairments

Otitis media continues to affect American Indians at high rates leading to hearing loss. For example, in South Dakota, otitis media is reported to occur in Native children at a rate 20-30 percent higher than for non-Native children (Pipes, 1990). However, it is suspected that the detection of hearing loss goes undetected for Native children thereby missing the opportunity for appropriate educational and therapeutic interventions. Impact of hearing loss may affect language development and possibly educational lag. Even a mild hearing loss can result in a student being a grade level behind (Quigley, 1978).

Meningitis

Estimates are that the bacteria of hemophilus influenza type b (HIB) which causes meningitis affects Navajo and Apache children at a rate 10 to 50 times greater than in the general population of children (Habbersett, 1989). Of the approximate 12,000 cases of HIB, most of the cases affect American Indian and Eskimo children. Although half of the children with meningitis recover, 5-10 percent will die and 30 percent will experience adverse neurological effects. Most of the children affected by meningitis are under the age of 12 months. Meningitis can result in paralysis, mental retardation, or speech and hearing impairments.

Assessment

American Indian and Alaska Native students with special needs are placed in instructional programs influenced by the assessment process as required by law and regulations. The assessment process is a critical component in making decisions for the students' programs. Key issues in assessment that need to be addressed in evaluations of American Indian and Alaska Native students with special educational needs are presented in this section.

Assessment Requirements According to Public Law 94-142

Children are referred for evaluation for a range of educational concerns. The assessment process is meant to determine the nature of the concern and how the need can be met, possibly through special education or other services. While there may be variations to the implementation of assessment, Public Law 94-142 requires the following:

> "State and local education agencies shall ensure, at a minimum that:
>
> a. Testing and evaluation materials and procedures used for the purposes of evaluation and placement of handicapped children must be selected and administered so as not to be racially or culturally discriminatory.

b. Testing and evaluation materials and procedures must be provided and administered in the language or other mode of communication in which the student is most proficient, unless it is clearly not feasible to do so.

c. Test must be administered to a student with a motor, speech, hearing, visual, or other communication disability, or to a bilingual child, so as to reflect accurately the child's ability in the area tested rather than the child's impaired communication skill or limited English language skill unless those are the factors the test purports to measure.

d. Tests and other materials used for placement must be properly and professionally evaluated for the specific purpose for which they are used, and administered by qualified personnel in conformance with instructions provided by the producers of the tests and materials.

e. Tests and other evaluation procedures must include assessment of specific areas of educational need.

f. No single test, type of test, or procedure may be used as the sole criteria for determining an appropriate educational program for a child.

g. Evaluation procedures must include an assessment that is sufficiently comprehensive to diagnose and appraise the child's suspected impairment; and a multidisciplinary approach for children suspected of having severe, multiple, or complex disorders, including a specific learning disability.

h. All relevant information with regard to the functional abilities of the child must be used in making a placement determination. (Federal Register, Aug 4, 1984, 300.158)"

Special education assessment is critical to all other decisions. In the absence of fair or non-discriminatory assessment, appropriate educational decisions for Native students with special needs may be seriously diminished. Further, to ensure that tests used in special education assessment of Native students is adequate and appropriate, tests must: (a) be administered in the child's native language, (b) be validated for the purpose for which they are used, (c) be administered by trained personnel, and (d) be tailored to the special educational needs of the students.

Criticisms of Assessment Practices

The recent INAR hearings had few comments on testing practices among American Indian and Alaska Native special education students. There were some concerns expressed regarding the validity of tests. However, available testimony did not elaborate on nor support that contention.

In the general investigation of testing practices throughout the United States, the following criticisms are equally pertinent to the special education assessment of Native students. Laosa (1977) stressed the need to evaluate testing practices in light of the major criticisms uncovered about testing:

1. Standardized tests are biased and unfair to persons from cultural and socioeconomic minorities since most tests reflect largely white, middle class values and attitudes, and they do not reflect the experience and the linguistic, cognitive, and other cultural styles and values of minority group persons.
2. Standardized measurement procedures have fostered undemocratic attitudes by their use in forming homogeneous classroom groups which severely limit educational, vocational, economic, and other societal opportunities.
3. Sometimes assessments are conducted incompetently by persons who do not understand the culture and language of minority group students and who thus are unable to elicit a level of performance which accurately reflects the child's underlying competence.
4. Testing practices foster expectations that may be damaging by contributing to the self-fulfillment prophecy which ensures low-achievement for persons who score low on tests.
5. Standardized measurements rigidly shape school curricula and restrict educational change.
6. Norm-referenced measures are not useful for instructional purposes.
7. The limited scope of many standardized tests appraises only a part of the changes in students that schools should be interested in producing.
8. Standardized testing practices foster a view of human beings as having only innate and fixed abilities and characteristics.
9. Certain use of tests represents an invasion of privacy. (Laosa, 1977; pp. 10-11)

In a study that examined differences in assessment practices and procedures for Native students, McShane (1979) a Native psychologist, observed that movement away from the concerns of fairness and discrimination in test instruments to the actual assessment process had taken place. McShane

determined that significant referral differences between the Indian students and non-Indian students occurred. Reasons for referral were varied, however culture was not an integral element in the decisions for referral.

In a review of 12 studies McShane (1980) explored the merits of three beliefs about test performances of American Indians. These three beliefs were:

1. American Indian students had poor language skills and would perform poorly on the verbal scales of the Wechsler tests.
2. American Indian students were shy, nonverbal and tended to be inhibited in responding verbally.
3. American Indian students had perception skills slightly stronger than verbal skills and performed better on the performance scale of the Wechsler.

McShane (1980) examined and analyzed these beliefs in testing and assessment in the studies identified in Table 2.

TABLE 2
Special Education Studies

Study Author	Tribe	State
Turner & Penfold (1952)	Chippewa, Muncy, Oneida	Ontario
Howell, et. al. (1958)	Navajo	Arizona, New Mexico
Guillams (1975)	Navajo, Apache, Chicano	Arizona
Hollingshead (1971)	Varied	Oklahoma
Cundick (1970)	Varied	South west
Hollingshead (1971)	Varied	Oklahoma
Peck (1972)	Varied	Montana
McReavy (1978)	Sioux	South Dakota
Reschley (1978)	Papago	Arizona

Variables which influence test performance in particular the low verbal scores include reduced language environment, cultural emphasis on performance rather than verbal/abstract skills, and hearing loss brought on by otitis media. Other factors affecting test performances might be test construction and testing environments (McShane, 1980).

Unique performance patterns by American Indian students on the WISC, WISC-R, and WPPSI were noted. Distinct or different performance patterns were found on the subtests other than the verbal-performance dichotomy; these patterns were observed on the Spatial, Conceptual, Sequential, and Acquired Knowledge subtests. For example, Spatial abilities were more developed than sequencing skills. There were also differences in performance between traditionally oriented Indians and acculturated Indians.

In a later investigation, McShane and Plas (1984) examined test performances on the WISC, WPPSI, WAIS, and WISC-R. There appeared to be an 8 to 19 point discrepancy between the Performance scale and other scales on the WISC-R, with the Performance scores higher than the others. While the "high-Performance" and "low-Verbal" characteristic of scores by Indian students on the WISC-R were consistent through many testings, it was concluded that this scoring pattern was not necessarily indicative of a learning disability as might be otherwise decided. Finally, when comparing scoring patterns of Indian students with samples of LD children, the scoring patterns of Indian students differed from those of the LD children. Furthermore, the BD, OA, and M subtests of the WISC-R could be construed as a spatial factor for Indian students and are skills indicative of a performance strength for Native students. Caution is recommended in interpreting WISC-R scores for Native students since the research on these factors have been sparse.

Factors Influencing Native Student Performances

Performances of Native students on psychometric tests such as the WISC-R can be influenced significantly by the developmental level of the Native child:

1. Language Skills. The language skills of Native students were critical to the test performances, particularly, since the verbal scores were lower than the scores on the performance subtests.

2. Physiological factors. One of the more common childhood health problems of Native children was otitis media. There appears to be a significant correlation between children who have experienced otitis media and test performances.
3. Neurological Factors. Hemisphericity was a possible factor in test performances. Bogen (1969) theorized that there were two thought modes, appositional and propositional. Associated with appositional thinking would be a right hemispheric preference, while propositional thinking would be associated with left hemispheric preference. McShane (1984) suggested that the general right hemispheric preference of younger Indian students may influence their acquisition of a second language and logically extended, affect performances on verbal subtests of psychometric measures. However, young college-age adults demonstrated a shift from the right hemisphere to the left.
4. Sociocultural Factors. McShane (1984) dismissed the "deficit hypothesis" arguing that an "equivalent cognitive capacity is required to produce the complex rule-governed activity called language — whatever the language or dialect. There may exist cultural differences that affect test performances.

Kerr (1988) compared the test performances of Indian students on the WISC-R and the K-ABC. The results of the study revealed similar global patterns of test performance. However, Kerr recognized that further research had to be undertaken before it could be generalized to other tribal groups. Furthermore, caution was urged when considering the utilization of either of the tests when making educational decisions.

Nance (1985) reported that when the WISC-R is used with Navajo students, the interpretation of scores on the PC, S, and MZ subtests as well as the PIQ global scale should be done with care. The PIQ global scale may not be the best measure of intellectual capacity in Navajos because of possible incorrect estimations of intelligence and biased predictions of achievement.

If the practitioner focuses primarily on predicting future achievement, the Full Scale IQ of the WISC-R is better at prediction even though the intelligence scores will differ from the average for Navajos. This finding could have relevance to other tribes.

It is difficult to develop and administer tests while trying simultaneously to ensure validity and reliability while avoiding bias. No instrument has been developed that accomplishes this. The WISC-R has been criticized and yet continues to be used. The K-ABC has been found to be an improvement, yet it too, has some aspects that require sensitive interpretations.

Changes in Assessment Practices

The influence of various factors on the test performances of minorities and American Indian and Alaska Natives has prompted further refinement of assessment so that the identification and placement of Native students with special needs can be done appropriately and accurately. Several researchers have advocated changes as summarized.

Academic Task Analysis

Cummins (1989) suggested alternative approaches to the assessment of cognitive and academic potential. Academic Task Analysis was an alternative to the traditional psychometric approach. It would encompass a more holistic or advocacy dimension to evaluation. Rather than focusing solely on the quantification of standardized tests for special educational placement, the Academic Task Analysis model encouraged student attainment of educational objectives as measured by various school developed procedures or criterion-referenced tests of academic tasks or skills.

Academic Task Analysis would locate the child's academic performance and lead to a program of instruction, stated in instructional terms. The Individual Educational Plan would consist of the assessment information of this model, and would describe and track the changes in the strengths and weaknesses. The validity of this approach depends on the sensitivity of the instructional program to factors that are pedagogical.

For instance, if reading is the area of Academic Task Analysis, the teaching of reading is not always directly linked to the diagnosis of reading deficiencies, such as miscue analysis or cloze tasks. Reading instruction is guided frequently by the articulation of a hierarchy of subskills, sequenced for instruction. Instruction begins with simple lower order skills to higher more complex skills. However, this organization of reading instruction may not be related closely to methods for assessing reading difficulty, in areas such as comprehension, word vocabulary, and reading strategies.

Mathematics may be an area of academic performance that has an inherent logical structure which may be easier to task analyze. The measure for determining learning problems in mathematics may be related more closely to the instructional methodology.

If Academic Task Analysis is to replace the traditional psychometric basis for the creation of an Individual Educational Plan, the instructional

model for the area of learning must be integrated with the task analysis.

Pluralistic Assessment

Another approach to assessment that draws away from the conventional psychometric test foci, is a pluralistic model that obtains information organized into some normative profile for individual ethnic or socio-economic groups. One model of this is the SOMPA (System of Multicultural Pluralistic Assessment) (Mercer, 1979). SOMPA integrated the test scores of the WISC-R with a set of sociocultural scales to create an Estimated Learning Potential (ELP). The scales revealed the extent to which a language minority student's world contrasted with the Anglo world. That difference in world configuration was examined in four areas: family size, family structures, socioeconomic status, and urban acculturation. Mercer (1979) suggested that an appropriate way to validate the SOMPA Estimated Learning Potential quotient would be based on the amount of variance in the WISC-R score accounted for by the social-cultural variation in the regression equation. A primary purpose of pluralistic assessments was to provide an alternate nondiscriminatory measure in the identification of students for placement into special education programs. Although there are some inherent validity problems that have caused the SOMPA to be used with some degree of caution and reticence, it was an attempt to respond to the overrepresentation of minority students in special education.

Assessment of L_1 Cognitive Functioning

This approach to assessment encourages the translation of norm-referenced tests (WISC-R into Navajo, Lakota, Cherokee, etc.) as a preliminary and imprecise placement indicator for educational purposes. The rationale behind this approach is to provide a better interpretation of student performance. Clarizio (1982) suggested that the translation method might provide a maximum score attained in both languages as an index of ability or potential. The scores of the translated and non-translated tests may move 5 to 10 points higher. It was suggested that within three to four months from the original bilingual assessment, a follow-up evaluation of the student's placement be made.

Culture-Fair Assessment Procedures

Still focusing on the concern with nondiscriminatory issues in placement testing, culture-fair tests have been created to address the concern with culturally biased instruments. Cattell's Culture-Fair Intelligence tests and Raven's Progressive Matrices have been administered to language minority and Native students for the purposes of profiling student performances in a nondiscriminatory and culture-fair manner. Each assesses some form of non-verbal reasoning ability and has been considered equally appropriate for use as has the Performance subtests of the WISC-R (Sidles, 1986). Another test, the Cartoon Conservation Scales of DeAvila and Havassy (1975) measures the Piagetian notion of conservation and has been considered to be fair for all students.

The Kaufman Assessment Battery for Children (K-ABC) measures intelligence and achievement in four global areas of functioning: Sequential Processing, Simultaneous Processing, Mental Processing Composite (Sequential plus Simultaneous), and Achievement. For language minority students, sociocultural norms are provided for score interpretation. Through the use of pantomime and associated motoric response, students with speech and hearing impairment, language disorders, or non-English speaking can be assessed on a nonverbal scale of selected subtests.

Reactions on the use of the K-ABC with minority students include those of Cummins (1984) and Nance (1985). Cummins, impressed with the potential of the test, stated "the K-ABC represents an important advance over conventional IQ tests; so much so, in fact, that it renders the WISC-R obsolete for use with minority students" (p.197). Nance reported favorable results in a study that examined validation issues of the K-ABC with Native Americans (Navajos). The instrument tended to provide an "accurate measure of assessment for both intelligence and achievement with respect to concurrent validity, construct validity, and lack of differential validity between Anglo and Navajo ethnic groups (Baca & Cervantes, 1989, p. 175).

However, not all of the major scales of the K-ABC were equally useful when assessing Navajos, particularly if the English language is required on the SEQ and ACH scales. Caution must be used when interpreting the GC, PS, AR, RI, RD, and RU subtests of the K-ABC because Navajos did not perform as hypothesized in comparison to their Anglo counterparts. Nance suggested that the Mental Processing Composite score of the K-ABC may be the most accurate indicator of intellectual capacity since it predicted academic achievement, while at the same time showing no significantly different mean scores from the Anglo sample.

Fuerstein's (1979) Learning Potential Assessment Device (LPAD) has potential for the assessment of minority students. Originally developed for Israeli immigrants, the LPAD became an assessment model for several language minority environments. The LPAD seeks to assess "how much an individual level of intellectual linguistic functioning can be modified (Baca & Cervantes, 1989, p. 175). It determines the amount of investment of teaching effort required to produce the specified degree of modification. It ascertains the extent to which the student is able to apply new patterns of functioning to other areas. It identifies the student's preferential learning style.

This approach gives a linguistically and culturally different student new learning tasks they have not previously encountered, observe their learning processes, teach them some principles of learning and problem solving, observe how easily they learn given teaching, and then require them to apply the principles to the solution of new problems.

Some limitations do exist for the LPAD. It demands that the practitioner possess certain personality characteristics such as the "ability to be active, stimulating, and encouraging during the assessment. It entails an enormous amount of time to administer the LPAD (several hours) and there is an associated cost that is higher than the costs for more traditional psychometric measures. Special Education practitioners may avoid the use of the LPAD if it is intended for screening or classification purposes alone. Group administration may be possible, but, the practicality still must be questioned if the special education assessment process of the practitioner is a traditional one. Attempting to administer individually the LPAD to the numerous students referred and scheduled for assessment during the beginning of a school year could pose logistical problems that could be reduced if another instrument was used, or if the LPAD was used on a selective basis.

Student Advocacy in Assessment

An alternative role configuration for a school psychologist or special educator, involved in assessment is to "become advocates for the child in scrutinizing critically the social and educational context within which the child has developed" (p. 116). Going beyond the traditional psychometric concerns in assessment, the child's entire learning environment is taken into consideration. There is a focus on how children's language and culture are incorporated within the school program. Educator/parent collaboration is stressed. Students are encouraged to actively use language (L_1 and L_2) with other students to expand their experiences.

De Leon (1990) devised an advocacy-oriented model for assessment that responded to the arguments Cummins (1989) made regarding advocacy roles of psychologists and special educators. Through the use of special assessment instruments, the investigator gathers and interprets information regarding the special needs of students. A dichotomized (Yes/No) survey of factors affecting test performances and interpretations was completed for each child. The categories were: (1) Family/Home, (2) Community, (3) School, (4) Classroom, and (5) Student.

Other pre-referral techniques were recommended that take into account cultural, linguistic, and personal experiences. With respect to language, de Leon stressed the analysis of the students' level of proficiency in terms of Cummins (1984) model of proficiency which conceptualized a context-embedded Basic Interpersonal Communication Skills (BICS) level of proficiency and the context-reduced Cognitive Academic Language Proficiency (CALP) level of proficiency. A Second Language Survey form was completed that indicated whether the learning problem, for which the student was being assessed, was affected by an inadequate level of language proficiency. It may prevent placement into special educational programs.

Socio-Cultural Dimension to Assessment

Hoover and Collier (1988) formulated an assessment "paradigm" that included socio-cultural dimensions for assessment. The three-part assessment procedure characterized in most applications of assessment are: Referral, Staffing, and Placement. The assessment techniques that enable decision-makers to implement referral, staffing, and placement, would consist of: (1) A review of records, (2) Interview, (3) Observation, (4) Work Samples of the Student, (5) Testing, and (6) Analytic Teaching. To reinforce the validity of the analysis generated from the elements of the Assessment Techniques, a Sociocultural Assessment component would be added. This component would obtain: (1) Cultural and Linguistic information, (2) Experiential Background, (3) level of Acculturation, (4) Sociolinguistic Development, and (5) Cognitive Learning Styles. Based on the collected sociocultural information, hypotheses would be created: (1) Sociocultural factors contributing to learning and behavior problems, (2) Sociocultural Factors not contributing to learning and behavior problems, and (3) Sociocultural factors and the

presence of handicapping conditions contributing to learning and behavior problems.

By integrating the sociocultural profile with the information obtained from the Assessment Techniques, the assessment paradigm would broaden its information base. It would include information beyond scores derived from tests of intelligence.

Test Development

Although testing instruments have not been developed in native languages with any broad-based use, there are initiatives being conducted by test developers and test publishers in response to bias in testing. For example, Psychological Corporation (1990) established a Bias Panel to review the Stanford Achievement Tests. The Panel consisted of Hispanics, African Americans, Native Americans, a women's advocate, and a representative from a rural community. The Educational Testing Service was also identifying teachers and others in education to provide input on testing issues in an attempt to reduce bias.

The United States has numerous cultural, ethnic, and linguistic groups. Among the American Indian and Alaska Natives alone, there are over 300 federally recognized tribes and 500 Alaska Native entities. Thus, in the development of tests, striving toward elimination of test bias is a monumental effort. Not only are there cultural and language differences, there are also regional and socio-economic differences.

Recommendations for Assessing Native Students

The assessment process and procedures necessitate that there be adequately trained psychologists and evaluators who can interpret and make appropriate educational recommendations for Native students. The educational fate of Native students should not be entrusted to professionals who lack awareness, interest or knowledge about the Native child who may have differing values and beliefs than the evaluator. The following recommendations are offered and incorporate findings described in earlier sections along with those by McShane (1983):

a. develop a comprehensive knowledge base of current practices in assessment,

b. establish a resource network of persons with expertise in testing Native students,

c. modify the assessment process by using the K-ABC or the LPAD on research basis and bring results to a network of professionals who can evaluate the usefulness of the instruments,

d. incorporate the advocacy (i.e., home, school, and community information) (de Leon, 1990) and socio-cultural aspects (i.e., work samples and analytic teaching) (Hoover & Collier, 1988). These assessment components focus attention on achieving valid predictions, placements, and educational plans, and

e. thorough knowledge of the child's cultural experience and location is critical for test interpretation. Information concerning reservation and urban ties, language spoken in the home, and extent of participation in a traditional customs can provide knowledge of the ecological context that can influence test performance.

The preceding discussion on concerns with traditional testing, performances of Native students on the most frequently used test, the WISC-R, and alternatives and recommendations for changes in assessment reveal ongoing refinement necessary for refocusing on the specific purposes and uses of assessment. The continued evaluation of the efficacy and validity of the various systems of assessment will lead to more appropriate decisions for American Indian and Alaska Native students with special needs.

Native Bilingual Students with Disabilities

Placement of children in special education places a particular challenge on educators to develop services and programs designed to meet the needs of children rather than "to classify them according to available services." (Hargrove, 1981). Thus, programs need to be designed to meet the needs of students who are linguistically and/or culturally different and who also have a handicapping condition. However, a range of factors suggest that the special education programs in which Native children are being placed are inadequate and minimally relevant. Factors which contribute to these issues include: (a) lack of adequately trained personnel to staff Special Education programs, (b) administrative and staff commitment to address needs of children with disabilities, and (c) programmatic and curricular responses to Native children who may require Special Education services along with Bilingual Education. Bilingual special education (See Baca & Cervantes, 1989) and crosscultural special education (see Ratleff, 1989) are for children with disabilities with varying needs; some of these children also need bilingual instruction in order to have access to an education.

Native Special Education Curriculum

Little was said about Native special education during the INAR Task Force hearings. Consequently, a review of literature was conducted. It, too, provided sparse information. An ERIC search on American Indian and Alaska Native special education was also attempted. From 1973 to 1990, only 47 citations were found. There were several years during that period when no citation was listed. Educators of Native students were not communicating to the larger audience throughout North America. Yet, teachers in Native special education have been concerned with the content of their programs and the effectiveness of their instruction. It has been a concern for teaching efficacy that continues to this day.

Curriculum

A modern viewpoint regards curriculum as what is learned and how that learning is taught. Curriculum, therefore, contains the tasks or content to be learned by students, as well as the methods or strategies used in applying that content. That is the approach taken in this discussion of Native special education.

Special education curriculum addresses two major areas of learning need: (a) Academic Curriculum. The need of children to acquire knowledge, and skills of the basic academic program, and (b) Functional Life Skills. The need of children to become self-dependent by acquiring functional knowledge and life skills. Before discussion begins on the basic content of special education instruction, special educators of Native students should be aware of two key issues affecting curriculum in the years to come. First, bilingual education, particularly the use of Native languages as a medium of instruction remains controversial. Special educational policy must consider the merits of Native language instruction in terms of the needs of its students and the desires of the local Native community. Second, the Regular Education Initiative (REI), which evolved from national policy on Least Restrictive Environment may affect special education at a significant level. There are other policy issues aside from these two. However, language and REI are issues that delve deep into the core of curriculum.

Bilingual Special Education — Policy/Implementation

One of the more controversial aspects of Native education is bilingual education. Decisions on what should be taught would be affected if bilingual education is incorporated into the curriculum. Instructional methods would change as bilingual education involves first and second language learning. However, bilingual education is not an easy proposition to implement.

Bilingual education brings out diverse opinions on its merits. Educators differ in their positions on bilingual education. Parents are often at odds with each other when educators consider teaching their children in the Native language. Administrators are pressured to implement bilingual and ESL instruction without adequate staff, program, and materials.

The use of the Native language as a medium of instruction is affected inevitably by the family and community preferences, and pedagogical merits. Families may believe that schools should assist in the maintenance of their Native language. Likewise, tribal leaders may realize their Native languages can be perpetuated through the assistance of schools.

However, once the decision to implement bilingual instruction is made, the implications on staff development, curriculum, materials, and supplies are enormous. The enormity of the decision depends on the commitment of interested parties to design, organize, and implement an effective program of bilingual education.

Certain factors enhance the effective use of the Native languages as mediums of instruction including: (a) levels of 1st and 2nd language proficiencies of Native students; (b) availability of teachers proficient in the Native language; and (c) adequacy of curricular materials for Native language instruction. Educators may seek alternatives to bilingual education because of its perceived demands on curricular change, funds, and resources. In addition, language proficiency in the first or Native languages cannot be assessed readily to the lack of valid and reliable instruments.

The educational policies cannot continue to be shaped by the alleged inability to determine proficiency, the unavailability of qualified teachers, and curricular inadequacy. If the sociopolitical forces of the Native communities stress the survival of their Native languages, and if it is believed that schools play a key role, then educators must face up to the decision on the basis of these demands. The school systems, as an institution of the local society, must adopt policies that commit to the use of Native languages as mediums of instruction.

Bilingual instruction has benefits beyond the classroom. It can empower the community through its bilingually educated youth. Greater access to societies institutions can be gained and

mainstream American society will not be so fearsome.

Regular Education Initiative

Academicians and researchers have become troubled over negative reports on the effectiveness of special education. That concern has resulted in an examination of the special education delivery system. Studies have challenged the very existence of special education (Algozzine, et al, 1990; Jenkins, Pious, & Jewell, 1990; Stein, Leinhardt, & Bickel, 1989; Larrivee, 1989; Reynolds, Wang, & Walberg, 1987). Curriculum, instruction, and policy may be changed within the decade as educational institutions respond to the reform proposition.

In a discussion on the efficacy of special education in the United States, Reynolds, Wang, and Walberg (1987) stated:

> Unless major structural changes are made, the field of special education is destined to become more of a problem, and less of a solution, in providing education for children who have special needs. (p. 391)

The remarks referred primarily to programs for the mildly handicapped rather than those for severely or multiply handicapped children. The concern stemmed from a perceived "flaw" in special education categorization that spills over into the compensatory education of poor learners attending programs such as Chapter I, who are similarly categorized. The critics of current special educational categorization stated that (a) existing categories are not reliable or valid for the mildly handicapped, (b) the cost to the educational institutions for maintaining the current categorization is considered excessive, (c) a high degree of inefficiency in the implementation of the procedures for categorization and ultimately this expense and inefficiency impacts heavily on the school programs, and (d) tremendous disjointedness between and within regular and special education results from the flaw. In the end, children who are not achieving in school are being shortchanged by the imperfections of the system.

The imperfections of the system of special education was considered a major contributor to the academic failure of many students in special education programs. There were four problems stressed by Will (cited in Jenkins, et al., 1990), that reflected concerns with special education:

1. Services for special and remedial children seem hopelessly fragmented in distinct categorical programs. This fragmentation not only impairs the programs effectiveness, but also causes children who need services to fall through the cracks.
2. Special and regular education operate as a dual system in which the responsibility for educating students with learning problems falls to the special programs, while the role of classroom teachers and building administrators is weakened. Special programs often remove students from regular classrooms for services and fail to coordinate their instruction with that of the regular classroom.
3. Students in special programs who are segregated from non-handicapped peers may be stigmatized, suffering negative consequences ranging from lowered self-esteem to unhealthy attitudes towards learning.
4. Rigid eligibility requirements associated with special programs create conflicts between parents and school personnel, who may disagree about a student's placement in a particular program. (p. 480)

The implications of the REI proposal for non-Native special education are the same for Native special education. The Regular Education Initiative, suggests that the responsibilities of the Regular Classroom teacher and the special education teacher must change. With that change in the responsibilities, the basic character of regular and special education and the roles of the teachers will occur.

Jenkins, Pious, and Jewell (1990) reviewed the literature on the Regular Education Initiative. They found that the REI proponents wanted regular classroom teachers to be responsible for (a) educating all students assigned to them, (b) making and monitoring major instructional decisions for all the students in their class, (c) providing instruction that follows a normal developmental curriculum, (d) managing instruction for diverse populations, and (e) seeking, using, and coordinating assistance for students who require more intense services than those provided to their peers (pp. 481-482).

The regular classroom teacher would assume primary responsibility and authority for devising an educational program for students in the classroom, including mainstreamed learning disabled and mildly handicapped students. If the regular program staff accept this shift in authority and responsibility, it must be determined which students, currently categorized as special needs students, should be taught in the regular classroom. Decisions on functions and responsibilities of regular and special education staff would require coordination.

Advocates of REI have yet to see their initiative translated into programs. Moving a philosophical and theoretical model of instruction into the field and classroom, no matter its merits, must be con-

vincing to educators in the field before it can be implemented.

Byrnes (1990) and Davis (1989; 1990) acknowledged certain merits of the REI, yet cautioned against schools jumping on the bandwagon and trying to implement a concept still in the formative stages. There are certain pragmatic realities that make any innovation difficult to implement. Radical reform such as the REI may be even more difficult if the concept is not evaluated by the practitioners in the schools and classrooms. Key issues that need to be addressed before an implementation of REI would include the following:

1. The Regular Education Initiative will have a definite impact on the number of children identified as handicapped and those who are identified will have their special needs served by the regular classroom.
2. State and Federal statutes and regulations have expected the system of delivery services to be provided through the current special education structure. The laws and regulations may need to be modified significantly to allow for service delivery to occur in the regular classroom.
3. Placement of the mildly handicapped or learning disabled students into the regular education classroom may lead to the diminishment of separate special education staffing and support. However, REI recognizes the consultative and in-classroom instructional support that would be necessary for certain learning situations.
4. Fiscal economic conditions of the federal and state governments may have a bearing on whether regular or special education programs are better able to service handicapped children. State legislatures are unpredictable and generally conservative in their financial support of education. Nowadays legislatures are seeking ways to reduce their contributions (Brynes, 1990, pp. 346-348).

REI and Native Special Education

This innovation presents its own challenges in producing acceptable levels of academic achievement among the non-disabled Native students. Unfortunately, current teaching practices, and the instructional organization of these schools have yet to produce the academic results desired for non-disabled Native students. Thus, the merits are questioned of shifting the instruction to classrooms that are unable to provide effective instruction for non-disabled students.

The REI proponents have a substantial research base suggesting that the pull-out programs, and the segregated interventions of special education have not shown the desired academic outcomes. Concern exists that pulling disabled students out of the classroom and into special education programs may be perceived as absolving teachers of instructional accountability. Native special education programs are a part of the current system of special education that is characterized by: (a) self-contained special education classrooms with some mainstreaming efforts, and (b) pull-out from the regular classroom into resource rooms where assistance is provided primarily in reading and math.

Educators in the Native special education programs and regular education programs who challenge the merits of the Regular Education Initiative might analyze the existing system. Evaluation of current programs would help identify those educational components which can be improved or require change. The following questions would guide and direct responses the local school may need to make:

1. To what extent does the Native special education program of the school provide an equal or greater opportunity to learn what is valued and tested in the school's academic curriculum when compared to the learning opportunity within the regular education classroom?
2. Since the purpose of Native special education is to effectively instruct Native students, to what extent does the special educational classification of special needs students accurately and reliably reflect the various disabling conditions.
3. Has the Native special education program been able to successfully prescribe a treatment tailored to the disabling conditions of the student.
4. Has the Native special education program been able to document significant long-term improvements resulting from the special education treatment or interventions for the disabling condition and/or remediation of academic delays or difficulties?
5. Has the Native special education program identified and implemented effective special education instruction that will facilitate performance of Native students to progress from the lower quartile closer to the mean or from non-mastery to mastery of academic skills at criterion level?

Early Childhood Education

Disabilities in Early Childhood

Native mothers and fathers look forward to the birth of each son or daughter. Their hopes for a

healthy "normal" baby are fulfilled most of the time. However, nature and nurture do not guarantee normalcy. Many factors affect the chances for normal growth. And if a child is born with complications or difficulties, their growth pattern may be altered. Years later as Native students with disabilities enter into high school, the chances for academic success may never occur.

However, infants and children with special needs can lead lives more normal than might have been expected. Early childhood interventions are emerging that may diminish deficit effects as children progress through elementary school. Research in special education has identified four major developmental domains that comprise some of the disabilities. Children with disabilities will show "delays, deficits, or distortions" in one or more of the domains.

Communication

Children communicate in verbal and nonverbal ways. Disabilities in this receptive and expressive ability will affect the nature of growth a young child experiences in the home, with peers, and later in school. Young Native children are exposed to a variety of social interactions that involve communication amongst family members, both young and old. Native parents do not systematically keep children from community activities, but rather children accompany their parents to council meetings, tribal ceremonies, dances, pow-wows, bingos, etc. Infants and toddlers are surrounded by the communication that accompanies such events. The verbal interactions, nonverbal signals of the family and community members are learned through this rich interactional environment.

Developmental problems in communication may not be easily detected unless specific indicators are exhibited. Language and communication delays can be explained to parents so that they might recognize them. Some of these communication delays include:

- **Auditory Impairments**. A primary cause for serious language and communication difficulties are deficits in the ability to receive auditory signals or input. If a parent speaks to their child, a normally expected response may not occur. A particular concern is otitis media, an ear infection common amongst Native children; the buildup of excessive fluid can eventually impair permanently a child's hearing ability. This hearing problem can lead to delays in learning.
- **Expressive Disorders.** Some Native children experience difficulties in using their oral muscles to create speech sounds. These impairments can impair articulations severe enough to distort or prevent speech. They may be caused by neurological and motor difficulties. Care should be taken to distinguish between misarticulations and sounds influenced more by the phoneme structure of the Native child's primary language (Navajo, Lakota, Tlingit, etc). Certain sounds of the English language may be difficult for a child dominant in his/her Native language.
- **Learning and Perceptual Disorders**. Difficulties in perceiving and understanding the speech of others may inhibit comprehension of language. Children may show difficulty with short-term memory, inattention, difficulty in sequencing, and directional problems. Assessment may be difficult in Native children with disabilities who may not be proficient in English. Native special educators sensitive to the linguistic and cultural setting can help reduce diagnostic errors which can occur through testing conducted in the non English language.
- **Cognitive Disabilities**. Language development of Native children who have cognitive disabilities ranges from mildly delayed to profound retardation. These children have varying degrees of mental retardation which impact on all aspects of there development. Early intervention can help to minimize the delays and optimize their development.
- **Affective and Behavior Disorders**. Communication and language skills can be influenced by affective and behavior disorders. Autism is one example of this disorder. They represent children who have difficulty in developing interpersonal relationships with others. Caution should be taken when assessing Native children. Lack of awareness of the child's culture may place the child at an unfair or misinterpreted situation in the educational diagnosis.

Affective-Social

Children begin to experiment and practice their socialization skills particularly as they turn 3 years of age. Delays in development of affective behavior limits opportunities for interaction in the social world of humanity. And educational success could be limited.

Social and emotional problems include:

- (a) social withdrawal; Native children considered socially isolate might find their ability to cope with the world diminished seriously by the lack of social interaction with peers. Behaviors, however, are largely defined by culture and situation.
- (b) Hyperactivity. Behaviors might include hyperactive mannerisms such as excessive talking, fidgeting, distraction, and constant movement. While children may exhibit these behaviors periodically, these behaviors would be of concern if they interfere with learning and daily activities.
- (c) Aggression. Parents become concerned when children kick, hit, throw, bite, and verbally abuse other people. Native parents and family friends may notice young children acting aggressively toward other children to the extent that harm occurs. Parents should not ignore these behaviors, for they may signal to the aggressive child that parents tolerate these actions. Classroom management in the preschool classroom is the first line of intervention perhaps through modeling of behavior and behavior management strategies.
- (d) Noncompliance. Young Native children who refuse to obey an adult repeatedly, no matter the significance or insignificance might be observed carefully by the parents and pre-school teacher to determine if this is a symptom possibly due to a hearing impairment. Behavior management can be established. Serious behavior problems should not be overlooked. Few children will exhibit these behaviors. Conditions which cause concern include:
- **Autism**. Autistic children, will unceasingly: (a) remain nonverbal, (b) be unaware or oblivious to others, (c) appear to be blind or deaf because they remain oblivious to others, (d) ignore playthings that normal children will become curious about, or manipulate the toys in a non-playing manner, (e) throw fits or tantrums, unusual laughter or sounds, or in the reverse, reveal no indication of emotion, (f) behave in a self-stimulating manner such as finger-flicking, rocking, and some other behavior that could cause self-injury, and (g) might exhibit some extraordinary high intellectual or high-functioning behavior such as in music, numbers, or mechanical manipulations.
- **Self-Stimulation**. Certain behaviors visible to others are often considered unacceptable by society when done incessantly and at socially inappropriate times. Body-rocking, finger flicking, hand flapping, teeth clicking, etc are examples of this behavior. People, who observe these behaviors, tend to react negatively without understanding the causation.
- **Self-Injury**. Children may harm themselves by pinching, hitting, or slapping themselves. Efforts can be made to modify behaviors. The professional is faced with the challenge to generalize the modified behavior to other situations. Success in modifying the behavior may be short-lived and temporary. Thus, efforts are made to sustain behavioral modifications.
- **Cognition**. Thinking, reasoning, and intellectual development are critical to the education of children. These are factors essential for acquiring skills necessary for comprehending the world around them and the interaction and manipulation of those aspects of life that will sustain them. School-related learning requires enormous amounts of cognitive ability as reading, writing, mathematical skills are acquired.

Native pre-school children who have cognitive deficits are in greater danger of educational failure if appropriate interventions cannot be applied before they attain the age of kindergarten. Unfortunately interventions may not bring normal cognitive ability and children must live in a world to which they must adapt their level of thinking and skills development to that reality. The causes of these include: (a) prenatal infections, (b) postnatal infections, (c) birth trauma, (d) metabolic/nutrition problems (e) cranial abnormalities, (f) chromosomal abnormalities, (g) gestational disorders, (h) fetal alcohol syndrome, and (i) accidents. Approximately 3 percent of the general population are affected (Heward & Orlansky, 1984). However, Native people experience higher rates of disabling conditions than the general population.

Sensori-Motor

Gross and fine motor development is included with sight, hearing, and other sensing competencies. Disabilities in any of these functions can diminish the opportunity to develop basic life-skills and to acquire knowledge and skills learned in school. Children with sensory disabilities often have difficulty with abilities such as: (a) object constancy, in which young children develop skills

in a spontaneous search for objects out of reach and thereby the expansion of the child's permanent world, (b) causality, in which young children realize visually that their behavior makes objects move or family members to respond to them, (c) object relations and concepts, in which young children comprehend the reason for reaching and grasping, and the interrelationships between objects, and (d) social communication, fostered through vision and touch, in which young children develop bonding between they and family members. Neuromotor problems also create development impairments for handicapped children. Children with cerebral palsy and other similar impairments are unable to sense and integrate motor skills with their senses. The building blocks for sensori-motor behaviors are obstructed. Impaired children are prevented from successfully performing basic tasks such as sucking, grasping, attending to objects through visual-auditory senses, and gross and fine motor movement. Developmental retardation, which is associated with the cognitive or mental competency of young children also affects areas of development mentioned previously. Profoundly mentally retarded children may not be able to (a) sit upright, (b) explore their environment visually and motorically, nor (c) create concepts of their body image and the person-object relationships.

Programs

Educational policies must state more comprehensively the efficacy of early childhood intervention programs that can diminish the effects of disabilities before young Native children enter into kindergarten and first grade. The type of program intervention will depend on the curricular model that is favored by the local educators. However, there must be greater evaluation of the merits prior to adoption of program models.

It is suggested that as special education early childhood program developers decide on the program model, to be mindful that very young children must learn to develop social interaction skills along with specific training associated with their disability. There is a strong tendency in special education to train students on a one-to-one basis. While that may appear to address behaviorally the disability, it limits development of social skills that are necessary for a fully developed child.

Native students with disabilities should be placed into an early childhood learning environment that provides for both group and individual settings. Control of student behavior should be balanced by the provision of opportunities to have students select activities of interest. Flexibility, independence, along with cooperation and individuality are balanced ingredients for a successful early childhood education.

Parental Involvement

Traditional Native parenting skills are vital in reinforcing appropriate interventions. With additional training, family interactions and attitudes with the disabled child can be modified so that greater constructive and nurturing support can be given by the family. Family support training should strive to meet criteria similar to that which Agosta, O'Neal, and Toubbeh (1987) stated for Navajo family interventions:

1. Recognize the family's underlying commitment to care for their family member with a disability
2. Embrace practices that promote, not discourage increased family independence from the formal service system, and
3. Take seriously the view of the family with regard to how the services should be designed and rendered (p. 41).

Family-oriented instruction can provide in-house interventions that utilize the resources of the home, including extended family members and a means to create a cultural foundation for development.

Additionally, families should be trained to apply new parenting skills to help develop clinically-based experiences for future formal schooling and to maintain traditional parenting skills that enable the Native child with disabilities to prosper in the home environment. Parents may, at first, hesitate in accepting an increased role if it is considered as the responsibility of some external service agent, such as the Indian Health Service or of the school.

Parents, regardless of income level, are capable of providing enrichment for children in the home. Other family members can be encouraged to foster literacy development. Literacy skills, however, are not only the reading skills traditionally taught in school. It is the awareness of the nature of written language, functions of print, and the form and structure of print. Awareness can be achieved through an abundance of storybook reading at home, in the car, on the way to town, or whenever a book can be read to very young children. This is preschool education for free and probably the most valuable of all. Families, rich or poor, who are willing to include the world of books into their home life will contribute to the literacy of their children.

Federal Requirements for Early Intervention

By 1990-91, under Public Law 99-457, all states seeking federal funds must provide education for handicapped children ages three through five. If LEAs don't comply they are subject to compliance penalties including loss of: (a) funding for the new Preschool grant, (b) monies generated under the larger Public Law 94-142 formula by the three through five population served; and (c) grants and contracts related to preschool special education authorized under the EHA discretionary program, Parts C through G.

A multidisciplinary team must assess and develop a written Individualized Family Service Plan (IFSP) which would meet developmental needs and may" include special education, speech and language pathology and audiology, occupational therapy, physical therapy, psychological services, parent and family training and counseling services, transition services, medical services for diagnostic purposes, and health services necessary to enable the child to benefit from other early intervention services. The needs of some pre-school Native children with special needs is being partially addressed by Public Law 99-457. It is an incentive both of a positive and negative nature for LEAs to develop new and innovative approaches to early intervention. The law focuses on clinical or medical types of interventions which will involve staff having professional background in the specific intervention. However, the nature of the intervention should also include some aspects of non-medical instructional designs that are commonly found in early childhood programs for regular or non-handicapped children. As young handicapped children are being trained in overcoming specific disabilities, their social interactive skills requires participation in group activities in addition to the typical one-to-one interventions of the medical model.

Native Bilingual Special Education

Native students have had to contend low academic expectations by educators who did not expect them to learn as well as Anglo students, because of their alleged linguistic and cultural deficits. Bilingualism was considered detrimental to academic achievement and basic intellectual ability.

In recent decades, bilingual researchers were successful in demonstrating that bilingualism can be a cognitive advantage. Instruction in the Native language is supported by the effects of the "interdependence hypothesis" which argues that academic proficiency developed in the Native language will transfer to English if there is adequate exposure and motivation to learn English (Cummins, 1984, 1986; McLaughlin, 1985). Bilingual education has provided equal or superior achievement opportunities for Native students, when the programs were well devised, classroom staff were bilingual, and parents were involved (Rosier & Holm, 1976).

Philosophical Premises

As Bilingual special education programs are developed for Native students, there ought to be a rationale, a purpose, a theoretical attitude that supports the articulation of programs which will be in the best educational interests of Native students. Cummins (1989) framed his theoretical attitude on the education of language minority students around the premise that minority students' academic difficulties are not caused by problems within the child or the culture, but caused by the way " .. schools have reinforced both overtly and covertly, the discrimination that certain minority groups have historically experienced in the society at large" (p. 111). Countries such as the United States have long applied discriminatory values to education and as a result diminished the ability or power of minority peoples to benefit from education. The antidote for this disempowerment would be for educators to assume direct instructive roles that reflect respect for the cultural identify and language of the Native students and other language minorities.

Educational policy at the local level should be transformed so that it requires staff to operationalize their belief in the value of and respect for the cultures and languages of the Native students. The following are actions which special educators can take to demonstrate their intent on empowering Native students through the valuing and respecting of Native culture and languages:

1. An additive orientation to students' culture and language such that student's L_1 experiences can be shared rather than suppressed in the classroom.
2. An openness to collaborate with community resource persons who can provide insight to students and educators about different cultural, religious, and linguistic traditions.
3. A willingness to encourage active use of written and oral language so that students can develop their language and literacy skills in the process of sharing their experiences and insights with peers and adults.
4. An orientation to assessment in which the primary focus is on the interactions that

> students have experienced within the school system and on ways of remediating these interactions where necessary (Cummins, 1989. p. 117).

Native students receiving special education services are typically not considered for bilingual education support. Yet, the law and regulations for disabled students require that a child has the right to receive appropriate and meaningful education. A special education teacher may posit that it is difficult enough to teach learning disabled students the most basic skills. Instruction in a native language coupled with use and perhaps development of culturally appropriate materials in the Native language may be considered too time consuming.

To counter those arguments, it is not illogical nor unreasonable to consider providing instruction in the language that the student knows best. It may facilitate the transition from the Native home environment into the classroom environment. Baca and Cervantes (1989) reassured special educators, suggesting that it is only natural that teachers "move the child from the known to the unknown through a linguistic or communicative medium ... already mastered" (p. 18). It is a matter of "building on children's acquired repertoires" gained through experience in their culture and Native language.

Federal law allows bilingual education for Native students with limited English proficiency as a way to provide educational opportunities comparable to the opportunities provided to English proficient students. Bilingual special education can help individual Native students to achieve their maximum learning potential, facilitating cognitive and affective growth, and establishing an ease or comfort for school, through the use of the Native languages. With the philosophical premises and rationale for bilingual special education established, the next step is to consider the procedure for designing a curriculum for bilingual special education to accomplish this task.

Designing Bilingual Special Education Curriculum

Currently, bilingual education programs are designed separately from other programs and appear to be distinctive and separate from the regular program as special education classes. That is, a school may provide Native language instruction under Title VII funds within a self-contained class, or through some clearly defined program within the regular classroom. The bilingual teacher and/or aide will be trained to use the Native language as a medium of instruction for all students without consideration for any particular disability.

Special education teachers often cannot speak the Native language or have not been trained formally in the techniques of using the Native language as a medium of instruction. The ideal bilingual program would have the special education teacher become proficient in the Native language and trained in appropriate bilingual methodology. Today, that is becoming more feasible since more Native teachers are instructing special education programs. They may have some level of proficiency in the Native language. If there are Native special education teachers, they could become qualified bilingual instructors.

It is not unreasonable for schools to move towards Native language instruction if there is a definite, comprehensive plan for implementing a program. The next step in creating a program is to design a curriculum that integrates the basic elements of bilingual education with the requirements of special education. Two stages in the development of bilingual curriculum are recommended. The first stage requires the establishment of a team consisting of parents, teacher, bilingual specialist, and special education specialist planning a individual educational program. The eight steps Baca and Cervantes (1989) consider to be critical in this effort are:

1. In the development of short and long-range individual educational plans, the team meets to initiate the planning.
2. The school staff involved in the team are to become familiar with the Native student's culture and language background. To facilitate the educational plan, information and materials useful for preparing the IEP and the instruction would be explored. Certain linguistic and cultural elements of the Native student may affect student learning (e.g., phonemes, syntax, time references, nonverbal communication styles etc.)
3. Become familiar with the special learning style and education needs of the child. But be careful of generalizing a particular style of learning to all Native students for learning style will differ from individual to individual, even within a family. There is no single set of learning styles that represent all Native tribes. Cooperativeness may not be a evident in all Native students. Competitiveness may be present in some Native students. Visual, right-brained preferences may exist for many children, but without testing for that preference, the team may err in assuming this style of learning.
4. Prepare individual instructional plans through a process of assessment, articula-

tion of objectives, instructional methods and evaluation. The use of the Native language as a medium of instruction is described in the plan.

5. Develop individualized lessons and materials appropriate to the Native student's needs.
6. Modify individualized lessons and materials using a "cultural screen" and sensitivity.
7. Refer to resource people for assistance and cooperation in instruction; coordinate services
8. Evaluate Native student's ongoing progress and develop new individual plan, materials, as needed (p. 207).

Policy Recommendations for Special Bilingual Education

Development of Bilingual Special Education programs should be premised on the following areas:

1. Schools need policy on "child-find" that requires the location and identification of bilingual Native children who have a disability. Some parents are unaware of the services available, and are reluctant to inform the school of their children's special needs, or are unfamiliar with the procedures for communicating with the schools. The child-find policy places the burden of locating the students on the shoulders of educators, rather than parents. It should describe the utilization of staff who are culturally and linguistically knowledgeable of the Native people.
2. Policy is needed to assure the accurate and proper placement of Native students into bilingual special education programs. Special education staff trained to interpret assessment information that may include language or cultural data are necessary for implementing this policy.
3. The rights of bilingual Native students with disabilities should be protected by policy to allow them to access all special education services required.
4. Policy is necessary to sanction the provision of bilingual methodologies in the special education services. If it is left up to the building level staff member, there may be teachers and principals who will utilize bilingual methodologies, while others may choose to teach English as a second language.
5. Policy should emphasize the importance of language proficiency in the educational process. Proficiency in language is considered a critical independent variable associated with academic achievement. The use of the Native language as a medium of instruction can lead to greater proficiency in English. The result being that communicative competency can further affect learning in other academic subjects.
6. School policies should be developed requiring the monitoring of the language development process. The development and revisions of IEPs should include information on current language development in both the Native and English languages.

Academic Curriculum

Native and non-Native students are expected to acquire the knowledge and master the skills contained in the regular or mainstream curriculum. By mastering the subjects, students move from grade to grade towards a high school graduation. Most states have comparable subject and course requirements for their public school systems. Private and parochial institutions reflect similar curricular requirements.

For example, California expects special education instruction to include these academic requirements: (a) Basic skills, including language, reading, writing, spelling, math, science, and social science, (b) Communication skills, (c) Socio-Interpersonal Skills, including positive attitude towards self and others, (d) Health and Physical Education, (3) Pre-vocational and vocational skills, (4) Art, music, and other forms of creative expression, (5) Citizenship, and (6) Development of higher order thinking skills.

Special educators adapt the regular curriculum in response to the handicapping condition which Native students possess. Some Native students may be able to attain a level of mastery equivalent to non-handicapped Native students, while others with severe disabilities may find mastery being formulated differently. Like California, most states consider reading and mathematics more important than other areas of learning; for literacy, computational and problem solving skills transfer to other subjects.

Until P.L.99-457, early childhood education was typically outside the purview of state public school systems. Head Start programs are a key provider of early childhood services and are funded from federal sources. Lately, political winds have been blowing favorably for early-childhood education. Educators in elementary and secondary education are beginning to recognize the need for initiating developmental activities such as Emergent Literacy during the preschool years. Curricular interventions for special education early-childhood education are gradually being implemented.

Reading

Reading is associated primarily with the ability to discern words in print and to comprehend the message of the author. Word recognition and comprehension are the basic processes of reading, which develop out of the early developmental skills of emergent literacy. To become efficient readers, Native students must recognize many words automatically, thereby freeing up mental capacity for thinking about meanings. Comprehension skills requires the Native students bring their prior knowledge or world knowledge, their knowledge of text structures to bear in an active information search, interpreting what they read and evaluating the merits of the message in print (Gillet & Temple, 1990).

There are opposing theories on how reading should be taught. Proponents for phonics based instruction contend that a systematic development of subskills in phonemes and graphemes articulation (decoding) must initiate the reading process. Without that phonic rule-skill base, it is believed that reading ability cannot be achieved. On the other hand, proponents for a meaning-oriented approach believe that words and phrases are more critical to the development of reading ability. While decoding has value, it is felt that decoding does not of itself lead to comprehension. Only instruction in comprehension strategies can accomplish this.

Native students with special needs must be given the chance for learning to read. Reading is one gatekeeping ability of society that opens doors into other worlds, be it a world of academic achievement, career accomplishments, or life-skills. As Mastropieri and Scruggs (1987) pointed out, students with special needs experience serious disabilities in reading skills. Consequently they can't participate in other activities of regular education which require a certain level of reading ability. The findings of reading research for the learning disabled have indicated that: (a) there are differences in reading comprehension between LD students and non-learning students, (b) LD readers may be taught self-monitoring during reading to improve comprehension, (c) LD students may succeed as well as other students on ability level and grade level materials with teacher guidance, and (d) Evidence supports the existence of minimal reading level for LD students to benefit from instruction.

Elementary Reading

Native students who are severely reading disabled should participate in a program of remediation patterned after their prescription. A plan of instruction for the student would identify the strengths and needs of the Native student. That plan would develop: (a) emergent literacy, (b) sight vocabulary, (c) reading fluency, (d) word analysis strategies, such as decoding, and context clues, (e) reading comprehension strategies, (f) listening comprehension, and (g) spelling ability. The skills can be learned in either English or the Native language. If a bilingual literacy program is available, the preceding reading developments would be key elements of the Native language literacy efforts.

Emergent Literacy

It has been established that literacy, which includes reading, begins well before children enter school. Pre-school and home activities can develop an awareness of pre-reading activities often labeled as reading readiness. However, emergent literacy describes an organic integration of the various readiness activities which can emerge of their own accord as children are exposed to certain basic experiences associated with the reading process.

Sight Vocabulary

As Native students grasp the graphaphonic system of the learned language, they become familiar with the syntactic system of the language being taught. They learn the word order, tense, number, gender, and all of the structural rules of a language. Native students become competent in understanding sentence organization and create appropriate sentence organization to demonstrate mastery of syntax. The semantic system, which relates to the "system of meanings in a language" (p. 27) is also acquired. This is "at the heart of reading. We evaluate the reader's use of the semantic system with questions about semantic acceptability and meaning change (Goodman, Watson, & Burke, p. 28).

Middle and High School Reading

Native pre-adolescent and adolescent students who are severely disabled in reading have already failed to read. The implications of this failure are serious. Much of the coursework in grades 6-12 requires independent reading ability and higher order thinking and comprehension skills. Students with disabilities are confronted with a nearly impossible task of maintaining passing grades when their reading ability is several years below grade level. Special education classes are geared towards improving that reading ability. Yet they too are challenged to accelerate a learning disabled student's reading level. If they graduate, which many do not, their reading level will not be at grade level, but may at least approach the ninth grade

level. Their chances for success in postsecondary training and education become limited.

The adolescent learning disabled or the mildly handicapped children reading well below grade level should not be abandoned or ignored. Specific instructional strategies can accelerate their progress, or at least can help them develop a functional level of reading. A reading program for the older learning disabled would include the development of: (a) automaticity in word recognition, (b) automaticity in word analysis, (c) comprehension strategies, (d) increased time spent reading, and (e) general knowledge.

Principles of Reading Instruction

As teachers stress meaning-oriented instruction, the reading plan begins to emphasize reading comprehension and the strategies used to achieve that ability. Some conclusions, which resulted from an in-depth study (Harste, 1988) of special education classrooms engaged in teaching instruction, are relevant to the instruction of reading comprehension for Native students. The list below is a modification of the Harste guidelines to reflect the needs of Native students:

1. A reading curriculum for Native students should accommodate the growth of all students disabled and non-disabled, and be flexible enough to adapt to individual, cultural and linguistic characteristics of pupils.
2. It should be a curriculum that assures growth in language and thinking and supportive enough to guarantee student success.
3. Reading and writing should be used actively as tools for learning in the classroom.
4. Reading and writing should be main elements of a language arts program as students are involved in speech, art, music, drama, and dance as means for communication and growth.
5. The reading and writing activities of the classroom should have a high degree of functionality.
6. Higher level thinking abilities must be developed through the implementation of planned instructional experiences.
7. Children are taught how to use various reading comprehension strategies such as storying, visualizing, inferencing, summarizing, generalizing, and drawing conclusions based on reasoning processes, including intuition.
8. As readers activate their reading strategies they must have a set of generic skills that facilitate other strategies. Enabling strategies for reading such as initiating, sampling, predicting, and confirming strategies are key to the acquisition of meaning.
9. Reading materials, activities, and methods to demonstrate text comprehension should be chosen by children. Self-selection, independency, and comprehension occur when individuals no matter the age are capable of accomplishing the reading task independently.
10. Teachers should maintain and use, as an integral part of the reading program at all grade levels, a well-stocked classroom library which includes poetry, newspapers and trade books, as well as content area books and magazines.
11. Teachers should provide daily opportunities for children to share and discuss what they have been reading and writing.
12. Skills should be introduced as options that readers have when encountering unknown items in print, and that children be taught that choice as to which strategy to use under which condition is an integral part of what it means to be strategic reader.
13. In lieu of, or in addition to, standardized tests, evaluators directly observe important behaviors, attitudes and strategies that they associate with successful written language use, learning and teaching.

Mathematics

When decisions are made regarding the content of mathematics instruction for Native students with special needs, the National Council of Teachers of Mathematics has suggested what should be taught. In their "Twelve Components of Essential Mathematics" (1989) the NCTM has summarized their thinking as follows:

- **Problem-Solving**. Learning to solve problems is the principal reason for studying mathematics. Problem solving is the process of applying previously acquired knowledge to new and unfamiliar situations. Solving word problems in texts is one form of problem solving, but students also should be faced with non-text problems. Problem solving strategies involve posing questions, analyzing situations, translating results, illustrating results, drawing diagrams, and using trial and error. Students should see alternate solutions to problems; they should experience problems with more than a single solution.
- **Communicating Mathematical Ideas**. Students should learn the language and notation of mathematics. For example they

should understand place value and scientific notation. They should learn to receive mathematical ideas through listening, reading, and visualizing. They should be able to present mathematical ideas by speaking, writing, drawing pictures and graphs, and demonstrating with concrete models. They should be able to discuss mathematics and ask questions about mathematics.

- **Mathematical Reasoning**. Students should learn to make independent investigations of mathematical ideas. They should be able to identify and extent patterns and use experiences an observations to make conjectures (tentative conclusions). They should learn to use a counter-example to disprove a conjecture and they should learn to use models, known facts, and logical arguments to validate a conjecture. They should be able to distinguish between valid and invalid arguments.
- **Applying Mathematics to Everyday Situations**. Students should be encouraged to take everyday situations, translate them into mathematical representations(graphs, tables, diagrams, or mathematical expressions), process the mathematics, and interpret the results in light of the initial situation. They should be able to solve ratio, proportion, percent, and direct variation and inverse variation problems. Not only should students see how mathematics is applied in the real world, but also they should observe how mathematics grows from the world around them.
- **Alertness to Reasonable Results**. In solving problems, students should question how reasonable a solution or conjecture in relation to the original problem. Students must develop the number sense to determine if results of calculations are reasonable in relation to the original numbers and the operations used. With the increase in the use of calculating devices in society, this capability is more important than ever.
- **Estimation**. Students should be able to carry out rapid approximate calculations through the use of mental arithmetic and a variety of computational estimation techniques. When computation is needed in a problem or consumer setting, an estimate can be used to check reasonableness, examine a conjecture, or make a decision. Student should acquire simple techniques for estimating measurements such as length, area, volume, and mass (weight). They should be able to decide when a particular result is precise enough for the purpose at hand.
- **Appropriate Computational Skills**. Students should gain facility in using addition, subtraction, multiplication, and division with whole numbers and decimals. Today, long complicated computations should be done with a calculator or computer, knowledge of single-digit number facts is essential and using mental arithmetic is a valuable skill. In learning to apply computation, students should have practice in choosing the appropriate computational method; mental arithmetic, paper-pencil algorithm, or calculating device. Moreover, there are everyday situations that demand recognition of, and simple computation with, common fractions. In addition the ability to recognize, use, and estimate with percents must also be developed and maintained.
- **Algebraic Thinking**. Students should learn to use variables (letters) to represent mathematical quantities and expressions; they should be able to represent mathematical functions and relationships using tables, graphs, and equations. They should understand and correctly use positive and negative numbers, order of operations, formulas, equations, and inequalities. They should recognize the ways in which one quantity changes in relation to another.
- **Measurement**. Students should learn the fundamental concepts of measurement through concrete experiences. They should be able to measure distance, mass (weight, time, capacity, temperature), and angles. They should learn to calculate simple perimeters, areas, and volumes. Measurement is essential in both metric and customary system using the appropriate tools and levels of precision.
- **Geometry**. Students should understand the geometric concepts necessary to function effectively in the three dimensional world. They should have knowledge of concepts such as parallelism, perpendicularity, congruence, similarity, and symmetry. Students should know proper-

ties of simple plane and solid geometric figures. Students should visualize and verbalize how objects move in the world around them using terms such as slides, flips, and turns. Geometric concepts should be explored in setting that involve problem solving and measurement.

- **Statistics**. Students should plan and carry out the collection and organization of data to answer questions in their everyday lives. Students should know how to construct, read, and draw conclusions from simple tables, maps, charts, and graphs. They should be able to present information about numerical data such as measures of central tendency (mean, median, mode) and measures of dispersion (range, deviation). Students should recognize the basic uses and misuses of statistical representation and inference.
- **Probability**. Students should understand elementary notions of probability to determine the likelihood of future events. They should identify situations where immediate past experience does not affect the likelihood of future events. They should become familiar with how mathematics is used to help make predictions such as election results, business forecasts, and outcomes of sporting events. They should learn how probability applies to research results and to the decision-making process.

Learning Difficulties in Mathematics

Students with Learning Disabilities often find difficulty in mathematics. The various types of disabilities they encounter can pose problems tackling even the most simple kind of mathematical exercise. The following are examples of disabilities affecting math performances:

- **Perceptual Figure-Ground**. Problems in Perceptual figure-ground involve visual and auditory deficits. First, indicators of visual deficits include: (a) inability to finish all problems on a page, (b) frequently losing place in a lesson activity, (c) inability to see subtraction in a division problem, and (d) difficulty in reading multi-digit numbers. Second, indicators of auditory deficits include: (a) trouble hearing patterns in counting, and (b) difficulty in attending to the task or what the teacher is saying.
- **Discrimination**. Problems in discrimination involve other visual and auditory deficits. First, indicators of visual deficits include difficulty: (a) in differentiating coins, (b) in differentiating between or writing numbers, (c) in discriminating between operation symbols, and (d) in associating operation signs with problems. Second, indicators of auditory deficits include difficulty in: (a) distinguishing between 30- and 13, and (b) difficulty with decimal numbers.
- **Reversal**. Problems in reversals are primarily associated with visual deficits including reversing digits of a number and difficulty with regrouping.
- **Spatial**. Problems in spatial abilities involve several visual deficits and an auditory deficit. Indicators of visual deficits include difficulty in (a) trouble writing on lined paper, (b) the concept of before/after, (c) noticing size differences in shapes, (d) in fraction concepts because of an inability to recognize equal parts, (e) writing decimals, (f) aligning numbers, (g) in understanding ordinal numbers, and (h) writing fractional numbers. An indicator of an auditory deficit is the difficulty in following directions using ordinal numbers.
- **Short-Term Memory**. Problems in short-term memory involve visual and auditory deficits. Indicators of visual deficits are trouble in retaining newly presented material, and difficulty in copying problems from the board. Indicators of auditory deficits include difficulty with oral math drills and dictated assignments.
- **Long-Term Memory**. Problems in long-term memory involve an inability to retain basic facts or processes over a long period and difficulty solving multi-operation computation.
- **Sequential Skills**. Problems in sequencing skills include difficulty in: (a) telling time, (b) following through a multiplication problem and long division problems, (c) solving column addition problems, (d) solving multi-step word problems, and (e) retaining story problems that are dictated.
- **Integrative Closure**. Problems in Integrative closure involve both visual and auditory deficits. Indicators of visual deficits include difficulty in: (a) visualizing math groups, (b) reading multi-digit num-

bers, (c) dealing with missing addends and missing factors, (d) drawing conclusions, therefore, trouble noticing and continuing patterns, (e) in solving word problems, and (f) continuing counting patterns from within a given sequence. An indicator of an auditory deficit is the difficulty in counting from within a given sequence.

- **Expressive Language**. Problems in expressive language involve difficulty in: (a) rapid oral math drills, (b) counting on, and (c) explaining orally why a problem is solved as it is.
- **Receptive Language**. Problems in receptive language involve difficulties in: (a) relating words to meaning, (b) with words that have multiple meanings, (c) relating word to meaning, and (d) writing numbers from dictation.
- **Abstract Reasoning**. Problems in abstract reasoning involve difficulties in: (a) solving word problems; (b) comparing size of numbers, using symbols; (c) understand patterning in counting; and (d) understanding decimal concept.

In addition to the list of difficulties, Burton and Meyers (1987) recognized that many of the learning disabled students are receiving math instruction in the regular classrooms. Therefore, the regular classroom teacher must be aware of the following interferences with a learning disabled students ability to learn mathematics. Learning disabled students tend to have difficulty:

1. Listening carefully to the teacher's presentation of a concept.
2. Concentrating on assignments when independent work is required.
3. Manipulating objects and writing symbols with adequate eye-hand coordination.
4. Copying and organizing their assignments into formats that are readable and spatially workable.
5. Distinguishing between the right and left sides of a multi-digit numeral.
6. Recalling the proper sequence of steps required in an algorithm; and understanding the process and performing each step.
7. Memorizing basic facts for addition, subtraction, multiplication, and division; and understanding the operational processes.
8. Assimilating the mathematical terminology associated with computational skills.
9. Associating symbols with words and ideas they represent (pp. 702-709).

Instructional Remedies for Disabilities in Mathematics

Remedies for those difficulties would involve a systematic integration of the following elements of a effective mathematics program:

1. The instructional environment should include a hands-on concrete-sensory activities since that appears the way in which young children learn. Concept development in mathematics must have more manipulative materials that facilitate this environment.
2. Written symbols/computational procedures typically should be introduced after or in conjunction with exploratory work which focuses on provide meaning to what is written.
3. Problem-solving should be integrated into all facets of a child's mathematics program.
4. Internalization of mathematical concepts and development of language skills are two aspects of learning which can and should reinforce each other. Instructional activities should offer students opportunities to discuss their thinking, ask questions, and present their interpretation of a mathematical idea or computational procedure. As with independent study skills, many learning disabled students do not automatically develop the appropriate mathematical language; consequently, they must be taught the specifics involved.
5. Students' feelings about themselves as learners and about their experiences with mathematics can greatly influence the level of their efforts and eventual success. By providing an environment that is accepting, encouraging, stimulating, and enjoyable, a program can foster a strong self-image and a positive attitude toward mathematics (Bley & Thornton, 1989, p. 5).

There are additional techniques effective with students having difficulty with mathematics. These can be incorporated into the remedies spelled out above. They address the visual and auditory problems described previously:

1. Special education teachers can increase the use of visuals and manipulatives to illustrate new and important ideas.
2. Visual cueing with boxes, circles, and lines can be drawn on the chalkboard or worksheet to help the student organize his visual perception of the problem. Visual cueing can also be accomplished by developing a color code that helps keep steps and sequences of a math procedure organized visually.
3. Fewer problems should be assigned so that accuracy can be achieved. Minimize or

eliminate copying by students from the textbook or chalkboard. Some learning disabled students cannot copy.

4. The presentation of the text material should be altered, adjusted to meet a special need that has been diagnosed. The standard presentation of lecture/recitation, chalkboard presentation, practice may have to be modified.
5. Allow younger children to finger tracing or perform other sensory techniques. It helps them attend to the math task and reinforces visual and auditory cues provided by the worksheet or verbal instruction of the teacher.
6. Capitalize on patterns in the math exercise and other associations to promote understanding or retention.
7. Use auditory cueing as verbal explanations are given. They aid the student in attending to task and following along, without losing his/her place.
8. Make samples for students who need them. Visual aides help them to replicate or perceive the way in which a problem or task needs to be visually organized.
9. Carefully sequence instruction in small steps, with adequate provision for practice and review (pp. 25-35).

Functional Life Skills

The disabling condition may interfere with an individual's ability to deal with ordinary life circumstances in a socially acceptable manner. Learning certain skills associated with this need will assist one in asserting some independency or power over everyday situations. The disabling condition also determines the nature of learning. Certain conditions may prevent an individual from achieving a normal rate and level of learning. Efforts are made to ameliorate, overcome, or compensate for the conditions to help the students achieve their potential. These are part of the basic curriculum and woven into the instructional day along with an appropriate level of instruction in the basic academic skills. Examples of instructional components include:

- ***Readiness and Academic Skills***. With preschoolers and elementary school children, basic reading and arithmetic skills are stressed. Later these skills are applied to practical work and community settings.
- ***Communication and Language Development***.Practice in using language to communicate needs and ideas. Specific efforts to improve memory skills and problem solving skills at the level of the student's ability.
- ***Socialization***. Specific instruction in self-care and family living skills, beginning at the preschool level with sharing and manners, then gradually developing in secondary school into subjects like grooming, dancing, sex education, and drug abuse.
- ***Pre-Vocational and Vocational Skills***. Establishing the basis for vocational adjustment through good work habits (promptness, following through on instruction, working cooperatively on group projects). At the secondary level, this curriculum stream can focus on career education and include part-time job placement and field trips to possible job sites.

Teaching Methodology

There is concern over the effectiveness of special education instruction, either in the pull-out programs or in the mainstreamed setting. Researchers have examined both models and have found mixed results. What follows are recommendations for reform in general teaching practices applicable to most special education teachers in the various types of classroom, self-contained, pull-out, and replacement.

Larrivee (1989) examined the research on the effectiveness of certain special education programs involving mainstreamed instruction and found disturbing results. First, the social status of mainstreamed children was not being impacted as intended. Second, the academic progress expected within a mainstreamed environment did not occur. It seemed that simply physically integrating the handicapped children into the regular classroom was insufficient to foster the improvement in academic progress.

In order to uncover classrooms that were succeeding in generating an acceptable level of academic progress and to discover certain teaching strategies that were correlated with that achievement, Larrivee studied mainstream-teachers for their effectiveness and arrived at the following teacher profile:

1. Provided frequent positive feedback to students.
2. Provided sustaining feedback to students responding incorrectly to questions.
3. Provided supportive, encouraging responses to students in general.

4. Provides supportive response to low-ability students in particular.
5. Provided supportive response to problem behaviors indicative of a learning problem.
6. Asked questions that students answered correctly.
7. Provided learning tasks that students could accomplish with a high rate of success.
8. Used classroom time efficiently.
9. Exhibited low incidences of teacher interventions.
10. Exhibited infrequent need to discipline students.
11. Exhibited limited use of punitive interventions.
12. Exhibited minimal response to students.
13. Criticized rarely student responses.
14. Allowed little student transition or non-instructional time.
15. Produced low rate of student off-task time.

Whether in the regular classroom or in the resource room, the teacher can find great success with Native students with or without disabilities. These are generic teaching behaviors that have been called for in effective schools literature in various forms.

Mastropieri and Scruggs (1987) explored instructional behaviors thought to be indicators of teacher effectiveness for special education. It has been conclusively demonstrated that teachers do make a difference in student learning and that teachers who learn and practice certain teaching skills are more effective than teachers who do not. Some of the teacher effectiveness variables that support that contention for special education are described in Table 3.

Larrivee and Mastropieri and Scruggs stress generic teaching behaviors that common to the "direct-instruction" model of teaching which has its advocates in regular and special education literature. The teacher dominates frequently the communication between teacher and students. Students are expected to receive through direct instruction all the logically organized knowledge and skills required for mastery. A hierarchy of skills and subskills are sequenced for instruction.

However, there are some concerns with "direct-instruction" methods for minority students that have relevance to Native special education. Cummins (1984) argued that the traditional transmission model of teaching reflected the standard curricular design for learning which emphasized, "academic task demands, establishment of sequential learning objectives based on this task analysis, "direct instruction" of individual task components, proceeding from "simpler" lower level subskills to more complex integrations of these subskills" (p. 222).

This approach had negative consequences for some children. The significant numbers of children identified as "learning disabled" may have been placed into special educational programs as a result of a "pedagogically-induced" effect of the

TABLE 3
Teacher Effectiveness Variables for Special Education

Variable	Description
Time on Task	Time students are actually working on specific tasks
Content Covered	Amount of information presented in a given period
Scope and Sequence	Amount to be covered and presentation order
Objectives	Behavioral outcomes of instruction
Pacing	Rate at which objectives are met
Providing Information	Teacher delivery of content
Questioning	Prompting of overt student response
Feedback	Teacher consequation of student response
Guided and Independent Practice	Practice learned behavior
Formative Evaluation	Continuous assessment of progress

"transmission" model of teaching. Teachers rather than continuing with that approach to instruction of educational need, Cummins (1984) proposed a "reciprocal interaction" model of teaching that incorporates the findings from other researchers that stress the following:

1. Teachers should hold genuine dialogue between student and teacher in both oral and written forms.
2. Instead of controlling student learning, teachers should guide, facilitate, and encourage student learning to the point of independency.
3. Teachers should foster collaborative student to student talk, keeping the dialogue on task and focused on the lesson.
4. Teachers should encourage language use that is meaningful rather than require student language use always to be guided by some artificial demand for constant correctness of the surface forms of speech.
5. Teachers should integrate consciously the development of language use with all areas of learning. Do not teach language separate from the other subjects.
6. Teachers should focus on building higher order thinking skills than the lower order skills exclusively such as factual recall.
7. Teachers should work towards intrinsic and extrinsic motivation as they present the tasks to the students for completion.

Summary on Curriculum Interventions

Native special education as it currently is designed encompasses most of the curriculum that is transmitted by the regular education program. The knowledge and skills of the academic program are expected to be learned by the Native students with disabilities. However, there are differences in performances exhibited by the disabled students caused by their disabilities.

Issues that require closer analysis are the policy areas of bilingual education and the Regular Education Initiative. Bilingual education may be critical to the survival of those tribes that desire the maintenance of their language, and students who have Native language proficiency will find the use of their Native language in the classroom beneficial to their acquisition of academic knowledge and skill. It will empower them to obtain the rewards of a successful education.

The Regular Education Initiative is a radical alternative to the current system of special education that separates its programs from the regular classroom through various structures. Researchers have claimed the current programs have not succeeded in preventing academic failure to many if not most of the disabled students. The REI advocates suggest that the regular classroom teacher can, if trained properly, provide instruction to the learning disabled and the mildly handicapped, better than a separate system of instruction represented by the current special education system.

Special education early childhood programs for Native children are critical to any preventative measures in the preschool years. Nationwide policies on comprehensive child-find and preventative education are essential for Native infants and young children.

The academic program for Native students with disabilities replicates the content of the regular program. However, their disabilities suggest special approaches to accommodate their effects. Reading ability can be acquired by Native students if instruction is focused on critical skills such as sight vocabulary, word analysis skills, and reading strategies. There is a need to instill in the Native students a higher degree of automaticity so they can focus their cognitive abilities on the higher order thinking required in later grades.

Mathematics is another area of academic difficulty Native students with disabilities have experienced. There are several aspects of their disabilities that cause problems in mathematics. The interventions necessary for remedying these problems were listed. The utilization of all the senses is critical to their learning. Concrete manipulatives, visual and auditory cues foster understanding and attention.

Generic teaching skills associated with "direct instruction" have been found useful in special education programs. If trained properly in the use of these skills, regular and special education teachers can improve their effectiveness with regular and special education students.

Personnel

Personnel Shortages

Factors which impede significantly the delivery of services to Native children with disabilities are the lack of trained Special Education personnel to fill vacancies and high rates of staff turnover. High staff turnover affects the quality and consistency of educational programs for Native students. Specifically, there are few Native people studying in fields which would prepare them to meet the educational and service needs of Native people with disabilities. Personnel include those trained

in the fields of special education, physical therapy, occupational therapy, speech pathology, audiology, vocational rehabilitation, school psychologists, and other support personnel.

School districts in rural areas are particularly affected by the lack of trained professionals. Special education students who graduate from universities are recruited readily and typically find jobs with relative ease; many prefer to work in urban areas. Rural and reservation school district administrators use varied avenues to recruit teachers to fill vacancies. Administrators contact the University Colleges of Education and the Placement Offices. When efforts within the formal network of resources are exhausted they call on anyone who might be in a position to provide leads on where teachers might be recruited. I have received calls from school administrators on or near reservations recruiting for teachers from states like California, North Dakota, South Dakota, New Mexico, Kansas, and school districts throughout Arizona. The need is so great that teachers are occasionally recruited from one rural school district to another or from one state to another. For example, teachers can choose to work on either the New Mexico side of the Navajo reservation or the Arizona side; Arizona, however has higher salary ranges.

Difficulties in recruiting teachers and support personnel extend also to retaining teachers in those positions. Although teachers may find the rural or reservation location to be a challenge, maybe even an adventure, for some teachers, a reservation-based teaching position is accepted only until a more suitable position becomes available in an urban area. For some teachers who decide to teach in the rural or reservation communities, their expectations of a Native community may be discrepant from the reality of the situation. For example, some Native communities may be situated 30 miles from the nearest store from which to purchase gas, basic food items and some household items, however it may be 60 or more miles to a larger urban community. In the Alaska Native communities, where travel in the rural areas is often by boat or aircraft, weather is often the determinant of shopping trips for purchase of food and household items. Some families order food especially canned goods and household items in quantities sufficient to last the year in late Summer or early Fall so that they might be shipped before the waterways become impassable from ice.

Teaching in Rural Communities

Special educational professionals who decide to remain in rural or reservation communities do so for varied reasons. Features of rural employment can be both satisfying and unsatisfying. Offner (1989) listed responses given by social workers, nurse practitioners, special educators, mental health professionals, and physical therapists of rural employment in Table 4.

The Need and the Response

Needs inevitably point to the chronic shortage of trained professionals who can provide such services based on the number of individuals with disabilities and the type of disabilities. The broad and intensive level of needs outstrip the availability of resources. The urgency for training programs which would yield special educators and related personnel has been articulated consistently (Baca & Miramontes, 1985; Gajar, 1985; Ramirez & Johnson, 1988; Ramirez & Tippeconnic, 1979). Although there are university-based training programs, many of which are federally funded, the results of such training are not immediate. Programs of study may take more than four years for a bachelor's degree to include student teaching and 1 1/2 to 2 years for a master's degree which may require internships. Those who do complete their studies typically have job offers prior to graduation.

Table 4

Features of Rural Employment

Satisfying Aspects:
Relationship with other staff members
Variety of clients and assignments
Professional Autonomy
Therapeutic relationships with clients
Specific job tasks
Unsatisfying Aspects:
Low salary levels
Relationships with superiors
Excessive job demands and feeling overworked
Poor funding and budget cuts
Lack of professional advancement opportunities
Professional isolation

Note: From "Features of Rural Employment" by R.B. Offner, 1989, Meeting the Rehabilitation Needs of Rural Americans, p. 20.

Although special education training programs for Native students located at universities like Pennsylvania State University, and Northern Arizona University and speech pathology programs like the one at University of Arizona have developed relevant and creditable programs, efforts also focus on recruitment of students who can make the commitment to complete their studies. It is likely that most of the students will be either married with families or single parents. Native students must then balance their efforts and energies toward their studies and family needs.

The shortage of personnel who can serve Native children with disabilities impacts directly the quality of education. This personnel shortage cannot be tolerated, and direct and assertive approaches must be instituted if the education of Native children is perceived as a high priority. On this issue of trained personnel, school administrators, school board, parents, and community need to recognize that teachers and support personnel are integral components to a quality education. They also must make assertive efforts to encourage college students to pursue teacher training programs.

Universities must be take measures to ensure that the graduates from their programs are adequately trained for positions not only in urban areas but also in rural and reservation communities and schools with a predominant minority enrollment. In addition, university administrators, college deans, boards of regents and others must be informed directly about the needs for professionals who can serve children with disabilities.

Strategies for getting trained teachers and support personnel can be met through collaborative efforts and partnerships between tribes, agencies, and universities. For example, a school district in New Mexico in partnership with the University of New Mexico provided training to individuals degreed in areas other than education. The training consisted of university-based coursework coupled with school site-based training. A similar strategy might be implemented to get special education teachers. A recent development was initiated by the Bureau of Indian Affairs (BIA). The BIA signed a Memorandum of Understanding with the Peace Corps Volunteers to recruit returning Peace Corps Volunteers (Indian News, 1991) to teach on Indian reservations. Qualified participants would be placed in paid positions and will have opportunities to pursue graduate studies at collaborating universities.

Tribal community colleges have a role in responding to training needs on a local level. For example, the opportunities exist to develop and implement programs of study for special education aides, early childhood educators, rehabilitation technicians or perhaps speech technicians. Training programs might be designed for one to two years in duration culminating in an Associate degree. Emphasis would be on application of knowledge in a work setting or in the community. The foundation of study at the community college would serve as a stimulus to advance toward a bachelor's degree.

Many Native people have the desire and interest in pursuing training and education, however the purse is empty. Multiple personal and family demands on a limited income leaves little, if any, in reserve for expenses like tuition, board, and other costs. The scholarship funds, which exist through the Bureau of Indian Affairs and within tribes, are a primary source for college education funds. Native students and their parents will recognize readily that these funds rarely meet all college expenses. Native students will likely have to garner a collage of resources to fund their education with parents having to shoulder some of the expense.

Parents, Family and Community

Education calls for the involvement of parents. Special education laws and regulations have embodied the principle of parent involvement. Through the passage of Public Law 94-142 (The Education for All Handicapped Act), the awareness and importance of parent involvement made gains in terms of parental consent on aspects of evaluation, development of the Individual Education Plan (IEP), and special education placement. Information on procedural safeguards was conveyed to parents. Information about the child's education was to be forwarded to parents, in their native language when necessary. Although there may have been a sense of fervor in the initial years following the passage of Public Law 94-142, that commitment seems to have waned. In a study by Connery (1987), Indian parents were much less informed about their rights under Public Law 94-142 as compared to white parents. Less than 25 percent of Navajo parents were aware of the existence of the law while 75 percent of white parents knew of the law's existence. However, 68 percent of both groups of parents did not understand their rights as specified in special education policy.

The basis or premise for parent involvement continues to be promotion and development of learning in children. Involvement of parents in the education of their children signifies the interest

and support for the importance of learning, of teachers' efforts, and of educational goals and outcomes. As parents and members of a community, parent involvement is targeted as an essential ingredient in helping to achieve desired or anticipated educational outcomes. In terms of children with disabilities, development of strategies to ensure this involvement is paramount to the optimum growth and development of children with disabilities. Minnesota, through trained Native liaisons, has made efforts to promote and facilitate parent involvement (Stuecher, 1985). The liaisons serve to interpret and communicate concerns of Native parents to school personnel.

One will recognize readily that the learning and support needs of children are varied and diverse. Similarly, the needs of parents also vary given personal and family needs and concerns. Situations which may place anxiety or feelings of jeopardy on parents include limited resources for food, shelter, medical needs, utilities, etc. For parents from culturally or linguistically different groups, these are added factors of consideration in the involvement of parents. Parental needs and concerns will impact greatly on the level and extent of involvement with a child's education.

It is critical that we broaden our view of parent involvement given the varying responsibilities, needs, and priorities of parents relative to their families. Attendance at meetings may be the most efficient means of conveying information, however parents may not find this type of involvement to be the most realistic in terms of their commitments. Families who have a child or family member with a disability may experience demands on their time, energy, and resources to attend to the disabled family member. The type and extent of disability along with the range of resources available to the family who has a family member with a disability will determine whether the parent(s) might feel that they cannot cope nor respond to additional demands on their families.

The need for redefining parent involvement is guided by the changing dynamics of families and of society. Seefeldt (1985) suggested that parent involvement be characterized by: (a) being sensitive to the needs of families, (b) focusing on offering real support for families, and (c) providing true collaboration between home and school (p. 99). Thus, although parent or family involvement is desirable in enhancing the development and learning of a child, it should not place stress on the family, not should parent involvement have to be painful or unpleasant.

Families may focus their energies on the family member with a disability perhaps to the exclusion or oversight of other family members. Although parent involvement is desirable, it must also attempt to balance priorities in their lives. In one situation, there was a single parent with twin girls, one of whom was disabled. She also had older children, one of them was a son in high school. She acknowledged that her attention to her twin daughters had resulted in overlooking the guidance and encouragement her son needed. Her recognition of such needs helped her to bring a greater sense of balance to the attention needed by all the children.

Providing real support to parents would be in terms of facilitating parent involvement. It would be helpful to parents to have greater flexibility in times when parents might participate. Participation might also be influenced with availability of support like child care. Transportation is cited often by parents as a need. The absence of available transportation limits the parent involvement. While a school or program may not be in a position to offer transportation services, it would help parents if a network were in place where they would be put in touch with someone with whom they might catch a ride. Parent involvement should not be burdensome to parents nor be a source of stress or anxiety. Thus, support extended to parents helps parents to participate in their child's development or education.

Collaboration between teachers/educators and parents implies that interaction is one which is a partnership — shared responsibilities and benefits. Given the multiple demands on parents, use of their time should be related to the enhancement of their child's education. Parents must have a role in deciding the type of activities in which they which to participate. Although parents may initially have a role of receiving information (i.e., characteristics of their child's disability or strategies for helping the child to develop) or training (i.e., provision for special education through legislation), these should serve as a basis for a range of involvement in their child's education. For example, parents might work as partners with the teachers in reinforcing use of words in social situations (please, thank you, I want, etc.), or providing consistency in the structure a child might need for learning like limiting the distractions for studying.

Advocacy

Infants and young children with disabilities benefit from the care and support from parents and families; parent support groups can also help family members through the years when needs seem most intense for children with disabilities.

Children quickly grow to an adult age. Children can develop the skills to advocate on their own behalf should be taught.

Recommendations

Indian Nations At Risk Hearings

Recommendations for improved and effective services for Native children and adults with disabilities are advanced from two sources. Testimony presented at the hearings conducted by the INAR is a key source of recommendations. In addition, research reports, studies, and other sources of recommendations will be included.

Implementation of Services to Meet the Need

Simply stated, the mandate of Public Law 94-142 and its amendments to provide a 'free and appropriate public education' for children with disabilities must be implemented. Further, schools and native communities are at a loss of how to meet these educational needs in view of increased need and diminishing funds and resources with which to meet these needs. The needs outweigh the services and resources necessary to provide adequate services. Resources needed include program development, funds, and disparity in per pupil expenditures between public school districts and BIA funded schools. There was also concern for children who are classified as slow learners or 'at-risk' and for whom there is no additional help until they are sufficiently delayed to meet eligibility requirements for special education or until help is no longer needed if they have dropped out. Consideration must also be given to alternative educational programs ... Testimony which attests to these needs include:

> ... more educational programs (must) ... be developed to that the special and unique needs of the multi-handicapped students are met. ... programs should be designed so that these students can achieve a level whereby they can ... become independent. (Lucero, October 15, 1990)

> ... changes targeted for Special Education are designed to put us in a position of not being able to meet the basic legal requirements of Public Law 94-142. [as printed in Federal Register, May 3, 1990]

We take strong and unqualified exception ... that the unique educational needs of handicapped children should be ignored in order to effect a balance or reduction in the BIA's education budget" (Sierra, August 20, 1990).

"If a child is labeled as a slow learner by a psycho-educational battery, and achieves at that below-grade, the child can't receive outside help and is consigned to a classroom of 25 to 30 or more children. ... that's the way their education goes till they can't take it any more and get discouraged" (Baker-Benally, Clark, & Thieman, 1989).

Revised Definitions for Eligibility in Special Education Programs

There was concern regarding revisions for definitions of handicapping conditions (see Federal Register, May 3, 1990). Students eligible for Special Education funds would include only those with severe disabilities. Funds would not be available for other than the most severe disabilities and would thereby restrict funds for those with other types of disabilities such as attention deficit disorders, conduct disorders, and children with fetal alcohol syndrome or substance abuse syndrome. Statements from testimony included:

- "The ... proposed regulation ... that any condition less than a severe physical handicap does not merit special educational services will set public policy back to the last century. Fully ninety percent (90%) of ... students qualifying for services defined under P.L. 94-142 would be denied coverage under the proposed changes for ISEP standards" (Sierra, August 20, 1990).
- "The new definitions for several of the handicapping conditions are unduly restrictive. Implementation of these definitions will encourage schools to withhold or ignore pertinent information about a child in order to place him/her in special Education, since no other conditions or separate programs ... exist at this time to assist schools with the special needs of children with problems such as Attention Deficits Disorders, Conduct Disorders or ... fetal alcohol or substance abuse syndrome" (Billie, August, 22, 1990).
- "The revised definitions for special education preclude placement of most of these children in the Special Education Program" (Billie, August 22, 1990).

Pre-School Programs

"We are asking the BIA to address these issues (provision of special education intervention extended from preschool through the second grade without formally labeling them in the Special Education Programs) within the Special Education Program as they have been addressed in the

States' Special Education Program" (Billie, August 22, 1990).

Family and Community Involvement

The need for parent or family involvement is cited as a need of high priority. One of the avenues through which this can be achieved is by training parents about their rights relative to the education of their child with a disability. Efforts to invite parents to the school for meetings for purposes such as reviewing the individual education plan (IEP) can be an intimidating experience. Parents and families may perceive that one should be grateful for any services which can be provided even when they are inadequate. Input into the child's educational plan is invited, however it is difficult to offer suggestions when the range of options are unknown. Further, the language and terminology of the educational and related services are often confusing as they are presented by professionals from various disciplines.

Parents can be trained to respond effectively to the special needs of their children. They must be prepared to meet this responsibility. School districts and local communities can help parents to increase their knowledge base and to enhance their skills.

Future Programming Needs

Fetal Alcohol and Substance Abuse Syndrome. The effects of fetal alcohol syndrome (FAS) are real and impact on every aspect of life for the person affected by it. The rate of FAS is alarmingly high for our Native people ranging from 1 in 60 births among the Plains tribes to 1 in 450 births for Pueblo tribes in comparison to 1 in 600 to 1 in 750 births in the general US population (May, Hymbaugh, Aase, & Samet, 1984). The educational needs of these children can be anticipated and schools and social service agencies can plan and develop services to meet their needs.

Parents and community members can identify needs and issues of Native people with disabilities which require response. Such input can be given through state and local councils for developmental disabilities, independent living and special education. Organizations like the Association for Retarded Citizens or for Learning Disabled Children can also be contacted or perhaps established. The BIA can be contacted for a list of the membership on the BIA Special Education Advisory Committee. The groups provide a forum for input on existing and future needs of disabled Native people and their families.

Other Issues

Extended Year Schooling

Recommendations which call for year-round schooling would also affect children with disabilities. It would be beneficial especially for students with disabilities who might require weeks or months in the beginning of the school year to regain the progress made during the previous school year.

Dissemination and Awareness about Services and Resources. It was recommended that, the Indian Health Service should serve as a main vehicle for distributing information about disabilities and rehabilitation services to (Native) people, as well as providing client referrals for vocational rehabilitation services.

Networking of Resources

Persons with disabilities and their families often have other concerns or problems which may need to be met in concert with the disabling condition. Thus, there may be concerns with housing, as well as food stamps, child care, health care, etc. Determination of priorities have to be made although all concerns may fit in the category of 'high priority'. Since agencies often have limited budgets and resources, it would be beneficial to the children and adults with disabilities and to their families if the assistance were provided to help piece together a network of resources rather than being shuffled from one agency to another until frustration sets in and finally one gives up. In particular, a case manager would be helpful.

Training for persons with disabilities and their families. Native parents have little knowledge of the rights and procedural safeguards as protected by legislation (Connery, 1987). Children who have the potential for semi-independent or independent living skills might also take particular interest in self-advocacy as they approach adolescence and adulthood. A Sioux man with a disability indicated that he and many other Native people are not assertive by nature. It would be helpful to have assertiveness training for people with disabilities since they will likely be required to interact with non Native people who may be more talkative. In addition, training can prepare individuals with disabilities as self-advocates. Advocacy training would be useful for persons who wish to help advocate for people with disabilities.

Housing

In situations where individuals with disabilities might have limited or no access to education, training or employment, the Housing and Urban Development (HUD) should build such housing units. Homes in which there is a family member with a disability should also be considered for modifications by HUD or other agencies which might increase or enhance their level of independence.

Testimony provided to the INAR indicated a concern for the BIA Priority System between such programs as scholarships and adult education and non-education programs for services like general assistance, social problems, unemployment, and reducing crime (Billie, August 22, 1990).

Notes

The term 'disability' will be used in this report as the term of preference which is least offensive to people with disabilities.

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